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ABSTRACT

The appendix to the report of the minimum objective system of the Hinesburg Elementary School (Vermont) includes objectives for science, physical education, music, and library skills, from the kindergarten through grade 6 levels. Most objectives are presented in the format of condition (or task), student behavior, and criteria. Also included are schedules for curriculum activities throughout the year at each grade level. Graphs to help monitor student progress are given. The following types of objectives are included: life sciences, earth sciences, physics, physical education games of low organization, basketball, wrestling, gymnastics, singing, listening to music, and library skills. (DB)

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APPENDIX B:

HINESBURG ELEMENTARY SCHOOL

MINIMUM OBJECTIVES FOR

SCIENCE

PHYSICAL EDUCATION

MUSIC

LIBRARY

EC 062 889

This is a portion of a report on the development and implementation of a minimum objective system in the Hinesburg Elementary School, Hinesburg, Vermont, June, 1974. The complete report is made up into four separate sections:

1. A REPORT: THE DEVELOPMENT AND IMPLEMENTATION OF A MINIMUM OBJECTIVE SYSTEM IN THE HINESBURG ELEMENTARY SCHOOL
2. APPENDIX A: LANGUAGE ARTS OBJECTIVES DEVELOPED BY THE K-6 TEACHERS AT THE HINESBURG ELEMENTARY SCHOOL
3. APPENDIX B: HINESBURG ELEMENTARY SCHOOL MINIMUM OBJECTIVES FOR SCIENCE, PHYSICAL EDUCATION, MUSIC, LIBRARY AND MATH
4. APPENDIX C: REVISED MINIMUM OBJECTIVES K-6, LANGUAGE ARTS, HINESBURG ELEMENTARY SCHOOL

SCIENCE MINIMUM OBJECTIVES

Margaret Morse

"COGITO ERGO SUM"

Science must be integrated into a complete program with math, language, and social studies. I believe that elementary school children should be involved in two aspects of science teaching:

1. Development of the scientific method, skills through which the student encounters and solves problems in all areas. This development is essential to the development of comprehension and computation by logical thinking.

2. Exposure and interpretation of the various disciplines of science; biology, earth science, and physical science. Today is an age of science and awareness and analysis of these areas is essential in an individual's development.

Units

	Life	Physics	Earth
Sept.	Aquarium	Attributes	Rocks & Changes
Oct.	Seeds	Balancing	Sediments
Nov. 9	Insects	Structures	The Globe
	Pond Life	Microscope	Landforms
			Earth Material
	Micro. org.	Chem. Bal.	Earth Sci.
Nov.	Mammals	Lights & Shadows	Water
Dec.	Zoo-Class	Simple Mach.	Erosion
Jan. 25	Ecol. & Pollution Pop.	Colored Solutions	Climate
	Human Funct.	Photography	Mt. Building & Breakdown
Feb.	Farms	Snow	Sun
Mar.	Our Anat.	Magnets	S. System
	Birds	Cookbook Chem.	Moon
	An. Adapt	Electricity	Stars & Star Gazing
	Oceanography	K. Physics	Meterology Astrology
Apr.	Trees	Balancing	Light
May	Seed	Clay Boats	Heat Energy
	Budding Things	Why Measure	Fields & Forests
	Wild Flowers	Magnetism	Chem. Energy
	Native Trail		

A.

Grade 1

Life Science	Earth Science	Physics
Life in an Aquarium	Rocks and Changes	Attributes
The Aquarium Can you set up an Aquarium?	Rocks What is a rock?	A Block Building Can you build with A blocks?
Goldfish Do goldfish like light or dark places?	Shapes and Sizes Who has a big fat rock?	A Block Attributes and Values Can you make a set of big yellow pieces?
Aquatic Plants What kinds of plants are in and around the water?	Changing Rocks Can you change a rock?	Mapping How can you map with A blocks?
Snails Can a snail sail?	Soil and Sand Where does soil come from?	Mirror Cards What do a mirror do?
Water Insects What other animals live in the water?	Plants Do plants need rocks?	More Sets Can you make a set of big yellow triangles?
Algae The water is green. What does that mean?	Vermont Rocks What kinds of rocks do we have in Vermont?	Color Cubes What can you do with color cubes?
Changes What has changed in our aquaria?	Using Rocks Do we use rocks?	People Pieces Can you find a big blue adult?
Habitats What is a habitat?	Minerals What is inside of a rock?	Balancing A Blocks Can you balance 3 red blocks with 3 blue blocks
FIE TRIP Lake Iroquoi		

P.

Grade 1

Life Science	Earth Science	Physics
Of Mice and Men	Water	Light and Shadows
Mammals Are you a man or a mouse?	Land - Lakes, rivers Where is the water?	Flashlights What can you do with a flashlight?
Movement How do you move?	Sea Where is the sea?	Daylight - Shadows Can you make yourself both tall and short?
Homes Where do other mammals live?	Air: Clouds, etc. Is there water in the air?	Shadow Drawing Dan you draw your shadow?
Babies Are all babies like their parents?	Changes in State How does water get into the air?	Seasons Which season do you like best?
Growth How long does it take to become a grown up?	Precipitation What happens to water when it falls?	Mirror - lenses What do mirrors and lenses do to light?
Disease What is a germ?	Measurement How much will it rain?	Photographing Shadowing Can you take a picture of a shadow?
Life Activities How do we 1. Move 2. Breathe 3. Reproduce 4. Grow 5. (Respond)	Water Cycle Where does the water go?	Shadow plays Can you make a shadow game?
	Needs for Water Can you live without water?	Mirror Cards What can you do with a mirror?
FIELD TRIP Williston Health Clinic		

C.

Grade 1

Life Science	Earth Science	Physics
Farms in Vermont	The Sun's Energy	Snow-We Know
Animals What animals do we raise in Vermont?	What is it?	Water What is water?
Cycles What is a cycle?	Where is the sun?	Clouds What is a cloud?
Importance of the Cow Is milk important?	How do we use the sun?	Ice Cubes How fast can you melt an ice cube?
What do we grow?	Heat and Light What is heat? What is light?	Shapes What shape is a snowflake?
Products - Making Butter How can we use our animals?	Plants use the sun Do plants need sunlight?	Melting How long can you keep a snowflake?
Sugaring What is maple sugar?	Measuring Heat How hot is hot?	Igloo's Who lives in an igloo?
Nutrition Is what we eat important?	What is Energy?	Icicles and Snowmen What is the difference between ice and snow?
FIELD TRIP UVM Farm		

D.

Grade 1

Life Science	Earth Science	Physics
Trees and Their Products	Light Energy and Color	Balancing
Size and Growth What is the biggest tree?	Sources Where does light come from?	Explore What can you balance?
Leaves Do trees need leaves?	Looking at a Light Bulb Why does a light light?	Large Objects Can you balance a large object?
Where do trees come from?	A prism A rainbow Why is the rainbow colored?	Small Objects Can you balance a small object?
Bark What is bark?	What is color?	Unequal distances Can you balance with a short and long arm?
Hardwoods and Softwoods How is a pine different from a maple?	Color in Plants Why are plants green?	Objects Under Different Conditions Does a wet object wei as much as a dry object?
Apples Do you like apples?	Color in Animals What is camouflage?	Standards Can you weigh a ball with washers?
Flowers	Light Uses How do we use light?	Does shape make a difference?
FIELD TRIP Town Forest		

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Organisms in Classroom

CALENDAR OF INSTRUCTIONAL ACTIVITIES
WEEK OF ____________ UNIT________

	K	1	2	3	4	5 - 6		7 - 8	
Sept.	Gerbils Rabbit	Aquarium Guinea Pig	Greenhouse Gerbils	Bee Colony Ant Farm	Aquarium Crayfish	Aquarium White Rats Mold Garden	Terrarium	Turtle Lizard Hampster	Paraqueet Mealworms
Nov.	Aquarium Goldfish	Gerbils	Turtle Lizard	Fruit-flies Mealworms	Ant Farm Brine Shrug	Hampster		Paraqueet	
Jan.	Terrarium	Paraqueet	Mealworms Ant farm	Turtle Lizard	Hampster	Fruit-flies		Gerbils	
Mar.	Hampster	Turtle Lizard	Terrarium	Chicken Eggs Tadpoles	Paraqueet	Mealworms Ant farm			

Grade 1

CALENDAR OF INSTRUCTIONAL ACTIVITIES

Sept.	Nov.	Jan.	Mar.
Life Sci. Life in an aquarium (4)	Of Mice & Men	Farm in Vt. U. V. M.	Trees & Tree Products Town Forest
Physic A-G-P	Light & Shadows	Snow We Know Melting, Freezing, etc.	Sand Table Sorting, Balancing, etc.
Earth Sci. Rocks & Changes	Water Air Land Sea	The Sun	Light Energy

LIFE SCIENCE MINIMUM OBJECTIVES - GRADE 1

Condition	Behavior	Criteria
1. Given a biological environment with organisms living in it	the student will identify	at least 3 out of 5 similarities in a criterion of his own choosing
2. Given two different organisms in the classroom	the student will observe and describe	at least 5 attributes with 80% accuracy
3. Given an organism in the classroom	the student will measure	the size or shape of the organism with 80% accuracy
4. Given materials and an organism	the student will set up	an environment in an aquarium or terrarium
5. Given an organism in the classroom	the student will record	in pictorial form a log of at least 4 observations indicating independent thought
6. Given an organism in the classroom	the student will answer orally	questions relating to the life activities of the organism observed with 80% accuracy
7. Given a life science unit	the student will find	at least one library book on a related subject
8. Given a library book, above,	the student will show or read or discuss	21 ideas presented or portrayed by the book with 95% accuracy
9. Given a life science unit	the student will recognize and recite	at least 30 operational vocab. words with 95% accuracy

SYSTEM OF EVALUATION
Life Science
Grade 1

1. Given a biological environment with organisms living in it the student will identify at least 3 out of 5 similarities in a criterion of his own choosing.

Oral Evaluation

2. Given 2 different organisms in the classroom, the student will observe and describe at least 5 attributes with 80% accuracy.

Oral Evaluation

3. Given an organism in the classroom, the student will measure the size or shape of the organism with 80% accuracy.

The student will record measurement in his notebook.

4. Given materials and an organism, the student will set up an environment in an aquarium or terrarium.

Evaluation by child's demonstration.

5. Given an organism in the classroom, the student will record in pictorial form a log of at least 4 observations indicating independent thought.

Evaluation - Observations recorded in notebook.

6. Given an organism in the classroom, the student will answer orally questions relating to the life activities of the organism observed with 80% accuracy.

Possible questions:

1. How does it move?
2. Can it see?
3. What does it need to eat?
4. Is water important to it?
5. Does it grow fast or slowly?

7. Given a life science unit, the student will find at least one library book on a related subject.

Evaluate - book (note level)

8. Given the above library book, the student will show or read or discuss 2 ideas presented or portrayed by the book with 95% accuracy.

Oral Evaluation

9. Given a life science unit, the student will recognize and recite at least 30 operational vocabulary words with 95% accuracy.

Evaluate Notebook

PHYSICAL SCIENCE MINIMUM OBJECTIVES - GRADE 1

Condition	Behavior	Criteria
1. Given a set of physical materials	the student will organize and explain his organization	of 2 attributes or systems of patterns with 95% accuracy
2. Given 10 different objects	the student will order the objects	according to the attribute of size with 100% accuracy
3. Given a physical structure	the student will discriminate	3 out of 4 attributes (circles, squares, triangles, and diamonds) of the value, shape in both constant and changing shapes with 90% accuracy
4. Given a balance with a fixed pivot point	the student will balance	objects of different weight by adding or taking away weights from one side, or the other with 80% accuracy
5. Given various items as clay, ice, bread, balloons, etc.	the student will compare	the weight of the objects under changed conditions, i.e., wet, air content, shape change with 80% accuracy
6. Given a physical science unit	the student will record by tape, paper, pictures or manipulative materials	his results from exploration at least 70% of the time
7. Given a physical science unit	the student will experiment	to find the answer to a question of cause and effect (no accuracy required)

SYSTEM OF EVALUATION
Physical Science
Grade 1

1. Given a set of physical materials, the student will organize and explain his organization of 2 attributes or systems of patterns with 95% accuracy

Manipulative - Observation
Oral Evaluation

Question:

Can you organize (these) into two groups and explain why you decided on the groups.

2. Given 10 different objects, the student will order the objects according to the attribute of size with 100% accuracy.

Question:

Can you place (these) in the order of their size from smallest to largest?

3. Given a physical structure, the student will discriminate 3 out of 4 attributes (circles, squares, triangles, and diamonds) of the value, shape in both constant and changing shapes with 90% accuracy.

In (this structure) point out the circles.

In (this structure) point out the squares.

In (this structure) point out the triangles.

Are there any diamonds?

4. Given a balance with a fixed pivot point, the student will balance objects of different weight by adding or taking away weights from one side or the other with 80% accuracy.

Question:

Can you make these (two) objects balance by adding or taking away weights?

Evaluation by actual observation.

5. Given various items as clay, ice, bread, balloon, etc., the student will compare the weight of the objects under changed conditions, i.e., wet, air, content, shape change with 80% accuracy.

Questions:

What would happen to the weight of the following objects (if you get them wet)?

2. blow up the balloon?

3. flatten the clay?

6. Given a physical science unit, the student will record by tape, paper, pictures or manipulative materials his results from exploration at least 70% of the time.

Evaluation from Notebook

7. Given a physical science unit, the student will experiment to find the answer to a question of cause and effect (no accuracy required).

Evaluation from Observation

EARTH SCIENCE MINIMUM OBJECTIVES - GRADE 1

Condition	Behavior	Criteria
1. Given an assortment of rocks or other materials	the student will sort	at least 10 objects by 2 different criteria with 80% accuracy
2. Given materials such as rocks, water or plants	the student will experiment	to cause a change to occur with 100% accuracy
3. Given the above experiment with changes	the student will deduce	a cause and effect relation behavior, the change agent and the changed object (i.e., heat and melted butter)
4. Given a unit on Earth Science	the student will find	at least one book on a related subject
5. Given Earth Science conditions of Vermont	the student will recognize	at least 3 out of 4 factors which affect the Vermont landscape

SYSTEMS OF EVALUATION
Earth Science
Grade 1

1. Given an assortment of rocks or other materials, the student will sort at least 10 objects by 2 different criteria with 80% accuracy.

   Choose 2 ways of sorting (these objects)

   Evaluation by Observation - Checklist

2. Given materials such as rocks, water, plants, etc., the student will experiment to cause a change to occur with 100% accuracy.

   Evaluate by Observation - Checklist

3. Given the above experiment with changes, the student will deduce and describe orally a cuase and effect relation between the change agent and the changed object.

   Questions:

   Did (your object change?)

   How did (your object) change?

   What made (the object change?)

4. Given a unit on Earth Science, the student will find at least one book on a related subject.

   Checklist Evaluation.

5. Given Earth Science conditions of Vermont, the student will recognize and describe orally at least 3 out of 4 factors which affect the Vermont landscape.

Describe the land where you live.

Ellicit responses with regard to water; rivers, ponds
mountains
weather: temperature
moisture
winds
erosion
man: roads, houses,
fields plowed, etc.

EVALUATION CHECKLIST Grade 1

STUDENT________________________________
(Mark ✓ when ready/+ if successful completion
→ if needs re-evaluation)

	Dates			
Skills To Be Evaluated	N	J	M	M
Earth Science:				
1. Sort 10 objects in 2 groups				
2. Experiment to make a change				
3. Describe cause and effect relation				
4. Describe 3 things affecting the geography of Vermont				
5. Find one related book				
Physical Science:				
1. Organize materials and explain 2 attributes				
2. Order objects by size				
3. Discriminate between shapes				
4. Balance objects of different weights				
5. Compare weight under changed conditions				
6. Record results				
7. Experiment to find cause and effect				
Life Science:				
1. Identify 3 similarities in organism				
2. Describe 5 attributes of organism				
3. Measure size or shape				
4. Set up environment				
5. Record in pictoral log				
6. Answer questions about life activities				
7. Find book				
8. Show, read or discuss book				
9. Recite 30 new vocabulary				

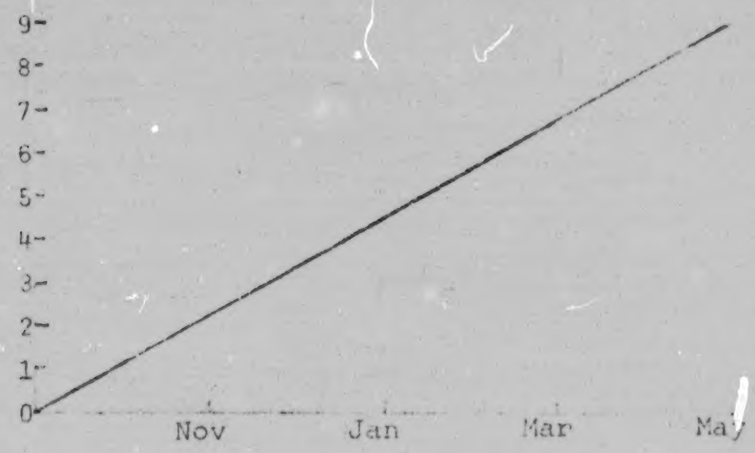
ACTIVITY CORRESPONDENCE TO OBJECTIVES

Grade 1

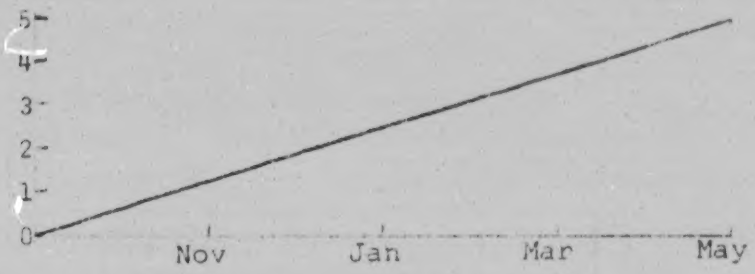
	Activities			
Obj.	A	B	C	D
Earth				
1	1 2 6 8	3 5	5	1 5 6
2	3 4 5 7	4 5 6 7	3 4 5	2 4 7
3	3 4 5 7	4 5 6 7	3 4 5	2 4 7
4	4 5 6 8	1 3 5 6 8	2 3 4 5	1 2 4 5 6 7
5	Terminal Obj.			
Phys.				
1	1 2 3 4 5 6 7	1 2 3 8	1 2 4	1 2 3
2	1 2 3 5	2 3	3 5 8	1 2 3
3	1 2 5	1 2 3 6 7 8	3 4	1 2 3 7
4	8		1 3 4	1 2 3 4 5 6 7
5			3 5	5 6 7
6	Terminal Obj.			
7	Terminal Obj.			
Life				
1	1 2 3 4 5 6 8	1 3 4 5 7	1 3 4 6	1 3 5 6
2	Organism in classroom			
3	Organism in classroom			
4	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7	1 2 4 5	1 2 3 4 5 6 7
5	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7	1 2 3 4 5 6 7	1 2 3 4 5 6 7
6	3 4 5 6 8	1 2 3 4 7	1 3 4 6 7	1 2 5 6 7
7	Terminal Obj			
8	Terminal Obj.			
9	Terminal Obj.			

STUDENT ______________________________ GRADE 1

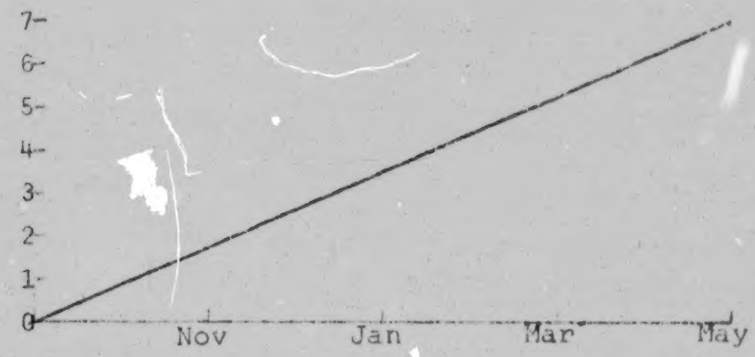
LIFE SCIENCE OBJECTIVES



EARTH SCIENCE OBJECTIVES



PHYSICAL SCIENCE OBJECTIVES



A.

Grade 2

Life Science	Earth Science	Physics
Scattering Seeds	Sediments	Balancing
1. Collecting How many different seeds can you find?	What is sand?	Can you balance using Eq. Dist. & Diff. Wts.?
2. Classifing Can you sort your seeds?	Separation of Part. Size Can you separate sand from stones?	Ineq. Dist. & Diff. Wts. Can you balance using inequal distances and different weights?
3. Planting How deep should you plant?	Soil How is soil made?	Make a Balance Mobile Can you make a mobile?
4. Seeds in Winter What happens in the winter?	Clay What is clay?	Weighing liquids Does a cup of syrup
5. Where do seeds come from?	Porosity What kind of soil is the spongiest?	Change in Material Change in Weight Does a ball of clay weig the same as a ball of steel?
6. Fruits and Nuts What are fruits and nuts?	Making Sand Can you make sand?	Weighing powders using a std.
7. Anim. Dependence - Seeds Who needs seeds?	Making Rocks from Sed. How are rocks made?	How much does an egg weigh?
	Fossils What are fossils?	Making Cookies Can you make good cookies?
FIELD TRIP Collecting Seeds		

B.

Grade 2

Life Science	Earth Science	Physics
Who's Who at the Zoo	Agents of Erosion Water Air Wind	Simple Machines
1. Mammals What mammals are in the zoo?	1. Water - What it does Floods What does water do?	1. Groups of Simple Machine How many machines do we use every day?
2. Birds Why does a bird fly?	2. Evid. of Water Erosion What is erosion?	2. Levers What is a lever?
3. Reptiles Where does a crocodile live?	3. Air and Wind What causes erosion?	3. Pulleys What is a pulley?
4. Amphibians What is an amphibian?	4. Deposits Where do you find deposits?	4. Wheels and Axles What are wheels?
5. Fish Where do fish live?	5. Hot and Cold When is hot not?	5. Inc. Plane What is an inclined plane?
6. Vert. vs. Invert. Earthworms	6. Glaciers Why do glaciers form?	6. Screw What is a screw?
7. All An. Needs What do we need to live?	7. Materials Why do some rocks erode faster than others?	
		8. Comp. Machines What is a compound machine?
FIELD TRIP Granby Zoo		

D.

Grade 2

Life Science	Earth Science	Physics
Growing Seeds	Heat Energy	Clay Boats
1. Drawing Do all seeds look alike?	1. Where it comes from Where does heat come from?	1. What is a boat? Experiment with diff. ma Can you float a boat?
2. Sprouting Can you make a bean sprout?	2. How it is used How do we use heat?	2. Shapes What shapes will float?
3. Water - light - heat Do seeds need water?	3. Heating Houses How do you heat your house?	3. Sizes, Materials How big an object will float?
4. Plant Growth - Graphing How much did your bean grow last week?	4. Changing energy forms Do you have any energy?	4. How many washers does it take to sink your boat?
5. Position and Space What happens if you plant a seed upside down?	5. Heat and Plants Do plants need heat?	5. Diff. liquids - Salt Water Which floats higher--sal or fresh water?
6. Roots Can you draw a root?	6. Clothing and Houses in diff. parts of world Do you have to wear shoes?	6. Uniform Wts. Using one type of weight, can you balance a clay boat?
7. Leaves What do the leaves look like?	7. Vt. Weather Is it always cold in Vermont?	7. Plastic cups Can you float a plastic cup?
	8. Making a Cookout How much heat does it take to cook a hot dog?	(How many ways can you make equal wts.?)
FIELD TRIP Planting a Garden		

Grade 2

CALENDAR OF INSTRUCTIONAL ACTIVITIES

WEEK OF__________ UNIT_________

Sept.	Nov.	Jan.	Mar.
The Scattering Seeds	Who's Who at a Zoo? Classification	Through the looking glass - our anat.	Growing Seeds
Physic. Balancing	Simple Mach. Erector Set	Magnets	Clay Boats
Earth Sediments	Agents of Erosion Water Air	Solar Syst.	Heat Energy

LIFE SCIENCE MINIMUM OBJECTIVES - GRADE 2

Condition	Behavior	Criteria
1. Given the school grounds	the student will collect and group	at least 5 different types of seeds with 80% accuracy
2. Given a group of organisms	the student will classify	according to 2 sets of criteria with 100% accuracy
3. Given organisms in the classroom	the student will observe and recognize	the location of the structures of the organism 80% of the time
4. Given organisms in the classroom	the student will measure	the size of the organism within 1/2" accuracy
5. Given an organism or pictures of an organism in the classroom	the student will draw	a diagram of the parts in their proper locations with 80% accuracy
6. Given a Life Science unit	the student will recognize and recite	at least 25 operational vocabulary words with 95% accuracy
7. Given a Life Science unit	the student will find and show	2 pictures from one library book on a related subject with 95% accuracy

SYSTEM OF EVALUATION
Life Science
Grade 2

1. Given the school grounds, the student will collect and group at least 5 different types of seeds with 80% accuracy.

Group the seeds you have according to their types.

Evaluation through Observation

2. Given a group of organisms, the student will classify according to two sets of criteria with 100% accuracy.

Can you group the (organisms) in these pictures by:

size
color
kind (examples)
length (of part)
movement
etc.

3. Given organisms in the classroom, the student will observe and locate the structures of the organism 80% of the time.

Look at your (organism) and find the following structures:

eyes
tail
(ears)
(appendages)
(skin)
etc. particular to an organism.

4. Given organisms in the classroom, the student will measure the size of the organism within ½" accuracy.

How long is (the gerbil) from nose to tail?

5. Given an organism or pictures of an organism in the classroom, the student will draw a diagram of the parts in their proper locations with 80% accuracy.

Draw (this organism) and label the parts (list 5 structures peculiar to the organism, i.e., eyes, ears, etc.)

Evaluate from notebook

6. Given a life science unit, the student will recognize and recite at least 25 operational vocabulary words with 95% accuracy.

Oral Evaluation

7. Given a life science unit, the student will find and show 2 pictures from one library book on a related subject with 95% accuracy.

Oral Evaluation

EARTH SCIENCE MINIMUM OBJECTIVES - GRADE 2

Condition	Behavior	Criteria
1. Given Earth Science materials as sand, water, rocks, etc.	the student will hypothesize	about at least 2 changes and their causes within one science period
2. Given Earth Science materials	the student will experiment	to determine the cause and effect of a chosen problem (no accuracy require
3. Given experimental materials exhibiting changes in earth science	the student will record	80% of the changes accurately
4. Given data about changes in earth science	the student will graph with string or construction paper	1 set of data with 80% accuracy
5. Given an Earth Science unit	the student will recognize and recite	at least 20 operational words with 95% accuracy
6. Given an Earth Science unit	the student will choose and discuss	illustrations or readings from 1 book with 1 point relating to earth science

SYSTEM OF EVALUATION
Earth Science
Grade 2

1. Given earth science materials as sand, water, rocks, etc. The student will hypothesize about at least two changes and their cuases within one science period.

   Suggested questions:

   1. Why do you think that (this material) has changed?
   2. What might have happened to this to make it look like this now?
   3. How has (this material) changed?
   4. What could you do to change (this material)?
   5. What would you expect to happen?

2. Given earth science materials, the student will experiment to determine the cause and effect of a chosen problem. (no accuracy required)

   Evaluation by Teacher Checklist.

3. Given experimental material exhibiting changes in earth science, the student will record 80% of the changes accurately.

   Notebook Evaluation.

4. Given data about changes in earth science, the student will graph with string or construction paper one set of data with 80% accuracy.

Graph the following data using string or strips of construction paper.

(Sample Data)

No. of (marine) fossils found in layers at arrowpoint.

Layer	
1	500
2	550
3	600
4	700
5	650
6	400
7	300
8	250
9	100
10	000

5. Given an earth science unit, the student will recognize and recite at least 20 new operational vocabulary words with 95% accuracy.

Oral Evaluation.

6. Given an earth science unit, the student will choose and discuss illustrations or readings from one book with one point relating to earth science.

Oral Evaluation

PHYSICAL SCIENCE MINIMUM OBJECTIVES - GRADE 2

Condition	Behavior	Criteria
1. Given materials and a balance	the student will balance	8 out of 10 objects with 100% accuracy
2. Given objects in the classroom	the student will classify	the objects according to the functions they perform with 90% accuracy
3. Given a Physical Science unit in balancing magnants, simple machines, or clay boats	the student will experiment	to find the answer to a question of cause and effect (with no accuracy required)
4. Given a Physical Science unit	the student will record by tape, paper, or manipulative materials	his results from exploration at least 70% of the time
5. Given questions on how materials function	the student will make	predictions from direct observation with 80% accuracy

SYSTEMS OF EVALUATION
Physical Science
Grade 2

1. Given materials and a balance, the student will balance 8 out of 10 objects with 100% accuracy.

   Evaluation through Observation

2. Given objects in the classroom, the student will classify the objects according to the functions they perform with 90% accuracy.

   Sample materials and groupings:

Specific Balancing Materials	Balancing
Specific Simple Machines	Simple Machines
Washers, nails, etc.	Magnetism
Things a magnet attracts	
Containers	Hold water

3. Given a physical science unit, the student will experiment to find the answer to a question of cause and effect (with no accuracy required).

Evaluation through Observation - Teacher Checklist

4. Given questions on how materials function, the student will make predictions from direct observations with 70% accuracy.

Sample Questions:

1. How does (the lever) work?
2. How is a (lever like a balance)?
3. What shape will float most easily?
4. Does (changing the material) change its weight?

5. Given a physical science unit, the student will record by tape, paper, or manipulative materials his results from exploration at least 70% of the time.

Notebook Evaluation

EVALUATION CHECKLIST Grade 2

STUDENT_______________________________

(Mark ✓ when ready/+ if successfully completed
→ if needs re-evaluation

	Dates			
Skills To Be Evaluated	N	J	M	M
Life Science:				
1. Collect and set up 5 types of seeds				
2. Classify by 2 groupings				
3. Locate organism's structures				
4. Measure organism to ½"				
5. Draw diagram of parts				
6. Vocabulary				
7. Find and show pictures from book				
Earth Science:				
1. Hypothesize about 2 changes and their causes				
2. Experiment to determine cause and effect				
3. Graph 1 set of data				
4. Record changes				
5. Recite 20 vocabulary words				
6. Discuss pictures or reading from one book				
Physical Science:				
1. Balance 8 out of 10 objects				
2. Classify objects by function				
3. Experiment				
4. Predict what will happen				
5. Record results				

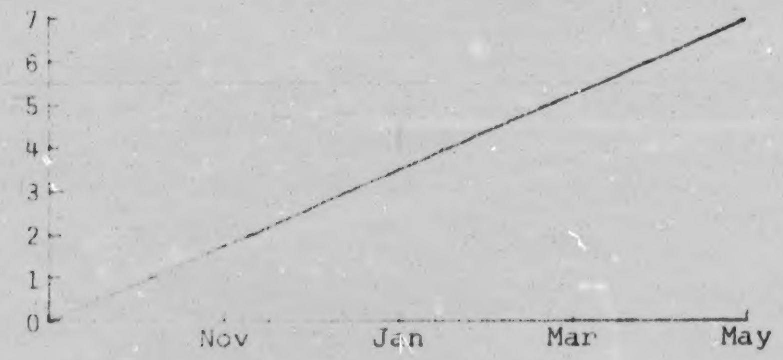
ACTIVITY CORRESPONDENCE TO OBJECTIVES

Grade 2

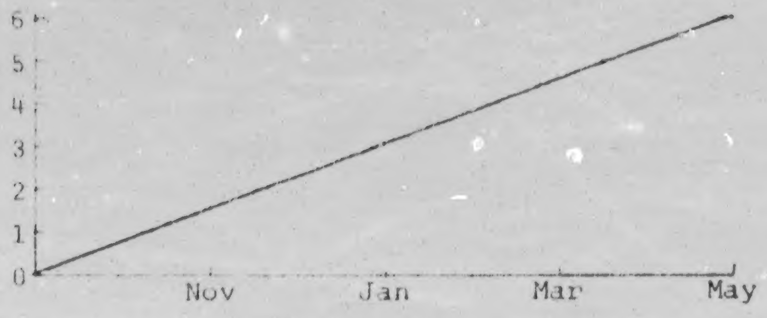
Obj.	Activities A	B	C	D
Life Science				
1	1 2 4 5			1 2 3
2	2 5 6 7	1 2 3 4 5 6 7	7 8	3 5 6 7
3		1 2 3 4 5 6	1 2 3 4 5 6	1 2 6 7
4	Organism in classroom		7	2 4
5			1 2 3 4 5 6 7	1 2 5 6 7
6	Terminal			
7	Terminal			
Earth Science				
1	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7		2 4 5 7
2	5 6 7	1 2 3 7	5 6 8	1 2 4 5
3		5 6	1 2 3 4 6 7	3 5 6 7
4	Terminal			
5	Terminal			
6	Terminal			
Physical Science				
1	1 2 3 4 5 6 7 8	1 2 3 4 5 6		4 5 6 8
2	6 7 8	1 2 3 4 5 6 7	1 2 6	
3	2 7 8		1 2 3 4 5	1 2 3 4 5 6 7 8
4	5 7		1 2 3 4 5 6	1 2 3 4 5 6 7 8
5	Terminal			

STUDENT ______________________ GRADE 2

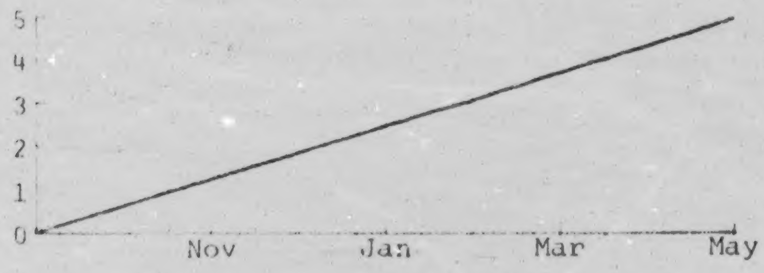
LIFE SCIENCE OBJECTIVES



EARTH SCIENCE OBJECTIVES



PHYSICAL SCIENCE OBJECTIVES



A.

Grade 3

Life Science	Earth Science	Physics
Animal Behavior	The Globe - Land Forms	Structures
1. Insect Collecting How are insects alike?	1. How much ocean How much land is there on the Globe?	1. Clay Towers Can you build a tower of clay?
2. Ant Farm What is a society?	2. Follow the main rivers Where are the main rivers in the U.S.?	2. Straws and Pins Can you balance 5 straws and 2 pins?
3. Bee-Insect and Society In what ways are we like ants and bees?	3. Mt. Ranges Is there any relation between the mts. and rivers?	3. Bridges How many ways can you bridge a 6' river?
4. Mealworm Behavior - Maizes Do mealworms have good behavior?	4. Where is the hottest weather?	4. Newspapers Paper Mache What can you say about paper mache?
5. Insect Life Cycles How does an insect grow?	5. Major Lakes in N. America What are the major lakes in N. America?	5. Communities Can you make a village?
6. Habitats Where do the different insects live?	6. What is a desert? Are all deserts hot?	6. Verticles and Horizontal What's up and what's down?
7. An. Senses Can all insects see and hear?	7. Agents of Change What causes change?	7. Attribute GP Can you build something using only one shape?
		8. Angles What can you build with few angles? What can yo build with many angles?
FIELD TRIP Collecting		

B.

Grade 3

Life Science	Earth Science	Physics
Ecol. and Pollution	Climates	Colored Solutions
1. Population What is population?	1. Vermont Is it hot in Vermont?	1. Dropping Colors into Water What does a drop of color look like?
2. Energy - Needs What resources do people use?	2. Tropical How do people live in the tropics?	2. Salt, Water and Color Is there any difference between clear and salt water?
3. Water Do people affect the water?	3. Sub. Tropical How do people live in subtropical climates?	3. Col. Sol. What color goes down fastest?
4. Soil Do we need to conserve the soil?	4. Temperate What is a temperate climate?	4. Liquid layers Will one color stay on t
5. Air Are we polluting the air?	5. Tundra Who wants to live in the Tundra?	5. Unknown liquids Can you tell what it is by its weight?
6. Forest How are we using the forest?	6. Hot Deserts How hot is it?	6. Ups and Downs Which goes up? Which goes down?
7. Industry Is our industry clean?	7. Cold Deserts. Alpine Where is a cold desert?	7. Weigh Liquids Which is heavier-- salt or fresh water?
	8. What we wear and Where We Live Would you wear a bikini in winter in Vermont? . . . . in Florida?	8. Expt.
FIELD TRIP Tour of Hinesburg		

C

Grade 3

Life Science	Earth Science	Physics
Birds	Where is the Moon?	Cookbook Chem.
1. Kinds What kinds of birds live in Vermont?	1. Physical Aspect - Draw the Moon Where is the Moon?	1. Weighing Things What can you balance?
2. Reprod. What is inside an egg?	2. Within the Solar System Movement Does the moon stand still?	2. Comp. Liq. Do all cups of liquids weigh the same?
3. Adapt. Do you have a beak?	3. Within the Solar System Distance How far away is the moon?	3. Phys. Change Can you get the salt out of salt water?
4. Nests - Homes Where do birds live?	4. Gravity What is Gravity?	4. Chem. Change What happens to the flour when you bake brea
5. Skeletons and Feathers How are bird bones different from your bones?	5. Phases of the Moon How often do you see a full moon?	5. Elements, Comp., and Mixtures What is an element?
6. Anat. of Chicken Do you have a gizzard?	6. Flight to the Moon Would you like to go to the moon?	6. Poisons What is a poison?
7. Flying Why can a bird fly?	7. Light for Night Does the moon give off light like the sun?	7. Household Chem. Do you use any chemicals at home?
	8. What happens in a month?	8. Weigh your ingred. How much sugar would you put in a batch of cookie
FIELD TRIP Ruth Bishop Birdwatching		

D

Grade 5

Life Science	Earth Science	Physics
Budding Things - Wildflowers	Fields and Forces	Why Measure
1. Collect Do all twigs look alike?	1. Friction What's stopping you?	1. Size - Linear M. Growth How tall is a giraffe?
2. Dissect and Observe What is in a twig?	2. Expt. with rate of falling object Which falls faster, a lead ball or a feather?	2. How big, How Little What is smaller than an ant? Bigger than a skyscraper?
3. Rings What do the rings of a tree mean?	3. Gravity holding us down What keeps you in your chair?	3. Geom. Shapes Are you a square?
4. Drawing Structure Can you draw 2 twigs showing their differences?	4. Space Flights - leaving gravity pull How does a space ship get off the ground?	4. Time What time is it?
5. Water Do twigs need water?	5. Expt. with Mag. Forces Can you show the force of a magnet?	5. Liquid Meas. How much milk is there in a carton?
6. Tree Pests Do trees have pests?	6. Making an electromagnet Can you make an electromagnet?	6. Solids, Liq., Gasses What happens to ice left on the stove?
7. Wildflowers Have you noticed the beauty in nature?	7. Mag. Field at Poles How is the earth like a magnet?	7. Directions How do you get to the Creamy Stand?
		8. Temp. Is it hotter today than yesterday?
FIELD TRIP Audubon		

Grade 3

CALENDAR OF INSTRUCTIONAL ACTIVITIES

WEEK OF________ UNIT__________

Sept.	Nov.	Jan.	Mar.
Life Animal Behavior Insect Collecting	Ecol. & Poll. Pop.	Birds	Budding Twigs & Wild Flowers
Physics Structures Erector Sets	Colored Solutions (water table)	Checkbook Chem.	Why Measure?
Earth The Globe landforms	Climates	Where is the Moon?	Fields & Forests

LIFE SCIENCE MINIMUM OBJECTIVES - GRADE 3

Condition	Behavior	Criteria
1. Given the school grounds	the student will collect and identify	the types of org. collected on the basis of their environmental needs with 80% accuracy
2. Given an organism in the classroom	the student will diagram and describe	a structure of the organism and its function with 80% accuracy
3. Given data on animal, plant adaptations	the student will observe	with 80% accuracy the relationship between the organism and its environment
4. Given a community of organisms	the student will deduce through observation	4 out of 5 interrelated needs of the organism within the community
5. Given a Life Science unit	the student will recognize and use in description	at least 25 operational vocabulary words with 95% accuracy
6. Given a Life Science unit	the student will read and discuss orally	at least 2 major points relating to the unit with 100% accuracy

SYSTEMS OF EVALUATION
Life Science
Grade 3

1. Given the school grounds, the student will collect and identify the types of organisms collected on the basis of their environmental needs with 80% accuracy.

Place organisms collected according to environmental needs.

Organism	Type Of Food It Eats	How It Gets Water	Where It Lives	Other

2. Given an organism in the classroom, the student will diagram and describe a structure of the organism and its function with 80% accuracy.

Evaluation from notebook

3. Given data on animal and plant adaptations, the student will observe and record the relationship between the organism and its environment with 80% accuracy.

(Sample)

Organism	Adaptations	Recorded relation to environment
Fish	fins tail scales	
Tree	bark xylem buds	
Flower	petals pistol	
Gerbil	eyes hair teeth	
Turtle	shell head	
Insect	antennae jaws eyes	

4. Given a community of organisms, the student will answer deductive questions from observation of 4 out of 5 interrelated needs of the organism within the community.

Possible questions:

1. Are all ants food gatherers?
2. In what ways are people like an insect community?
3. How could overpopulation become a problem for an organism?
4. What happens when 2 different organisms need the same kind of food?
5. How might polluted water affect a community of organisms?

5. Given a life science unit, the student will recognize and use in description at least 25 new operational vocabulary words with 95% accuracy.

Students will keep words in notebook

6. Given a life science unit, the student will read and discuss orally at least 2 major points from a library book relating to the unit with 100% accuracy.

Oral Evaluation

PHYSICAL SCIENCE MINIMUM OBJECTIVES - GRADE 3

Condition	Behavior	Criteria
1. Given solids and liquid materials	the student will observe changes taking place as a result of experimentation	in 8 out of 10 experimental trials
2. Given background observations of materials in the class	the student will predict	with 80% accuracy what will happen under certain conditions
3. Given a Physical Science unit and a variety of objects	the student will experiment to find the answer to a question of cause and effect	no accuracy required
4. Given solids and liquids in the classroom	the student will measure 8 out of 10 substances	with 95% accuracy
5. Given a Physical Science unit	the student will record by tape, paper, or manipulative materials his results from exploration	at least 80% of the time

SYSTEMS OF EVALUATION
Physical Science
Grade 3

1. Given solids and liquid materials, the student will observe changes taking place as a result of experimentation in 8 out of 10 experimental trials.

Student Data Sheet in Notebook

Experiment	Change

2. Given background observations of materials in the classroom, the student will predict with 80% accuracy what will happen under certain conditions.

What will happen to the material under the following conditions?

wet

heat

light

increased size

pressure

3. Given a physical science unit and a variety of objects, the student will experiment to find the answer to a question of cause and effect.

Oral Evaluation

4. Given solids and liquids in the classroom, the student will measure 8 out of 10 substances with 95% accuracy.

Teacher Observation Checklist

5. Given a physical science unit, the student will record by tape, paper, or manipulative materials his results from exploration at least 80% of the time.

Evaluate from notebook

EARTH SCIENCE MINIMUM OBJECTIVES - GRADE 3

Condition	Behavior	Criteria
1. Given a globe, a set of maps of Vermont, the world and the moon	the student will locate 2 different physiographic features	with 95% accuracy
2. Given data on temperature differences	the student will read and interpret graphs to show the effect of temperature differences	with 80% accuracy
3. Given an Earth Science unit	the student will observe and reproduce his observations on paper with pictures	within 95% accuracy
4. Given a map	the student will locate N, S, E, and W	with 95% accuracy
5. Given a compilation of data on astronomical, metorological, etc. events	the student will sequence the timing of events	within 80% accuracy
6. Given a map with latitude and longitude	the student will discriminate between latitude and longitude	with 95% accuracy
7. Given a thermometer	the student will measure 3 different conditions in the classroom	within 5% accuracy
8. Given an Earth Science unit	the student will recognize and use at least 25 operational vocabulary words	with 95% accuracy
9. Given an Earth Science unit	the student will read and relate orally or written 2 major points relating to his unit	with 100% accuracy

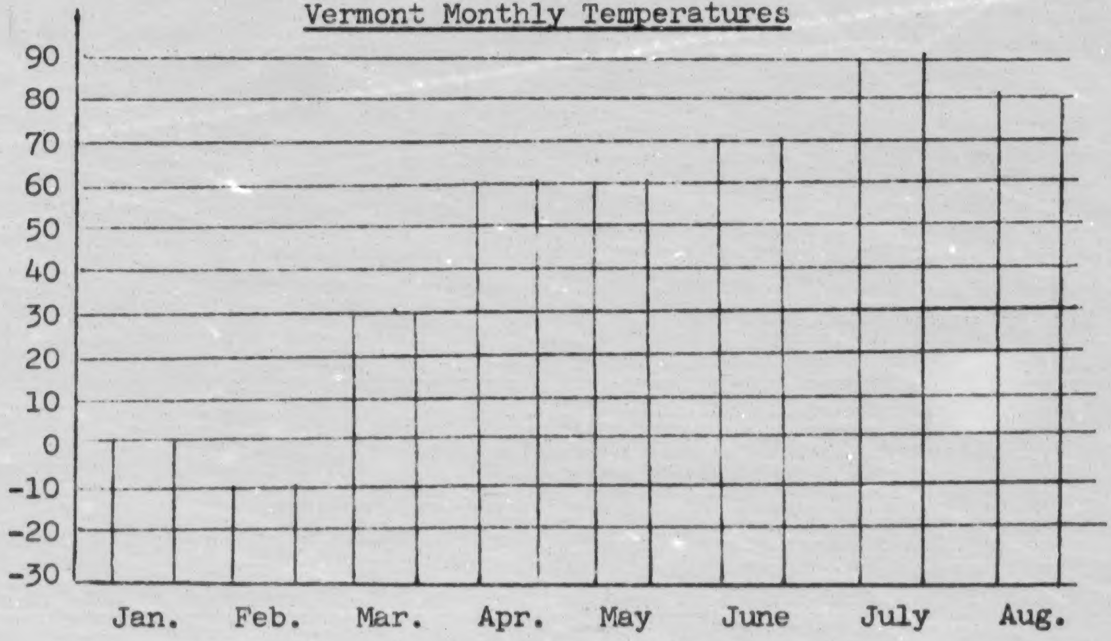
SYSTEM OF EVALUATION
Earth Science
Grade 3

1. Given a globe, a set of maps of Vermont, the world, and the moon, the student will locate 2 different physiographic features.

Examples:

Lakes
Rivers
Lowlands
Mountains
Deserts

2. Given data on temperature differences, the student will read and interpret graphs to show the effect of temperature differences with 80% accuracy.


Vermont Monthly Temperatures

1. Which month has the highest temperature?
2. Which month has the lowest temperature?
3. Which are winter months?
4. What is the hottest month?
5. Why did you decide this?

3. Given a map, the student will locate N, S, E, and W with 95% accuracy.

Evaluate orally using 2 different maps

4. Given a map with latitude and longitude, the student will discriminate between latitude and longitude with 95% accuracy.

Evaluate orally using 2 different maps

5. Given a compilation of data on astronomical, meterological, etc., events, the student will sequence the timing of events within 80% accuracy.

Example (Astronomical Data)

June 1972

June 21	Summer Solstice
June 26	Moon rises after sunset
June 4	Moon last quarter
June 17	Venus appears close to the sun
June 12	Look for crescent moon
June 7	Venus sets 1 hour after sunset

6. Given a thermometer, the student will measure 3 different conditions in the classroom within a 5° accuracy.

	Condition	Temperature
i.e.	ice water	
	boiling water	
	lukewarm water	
	upper pt. of room	
	near floor	
	near the window	

7. Given an Earth Science unit, the student will recognize and use at least 25 operational vocabulary words with 95% accuracy.

Record new words in notebook

8. Given an Earth Science unit, the student will read and relate orally or written 2 major points relating to his unit with 100% accuracy.

Oral Evaluation

9. Given an Earth Science unit, the student will observe and reproduce his observations on paper with pictures with 95% accuracy.

Notebook Evaluation

EVALUATION CHECKLIST Grade 3

STUDENT________________________________

(Mark ✓ when ready/+ if successful completion
→ if needs re-evaluation)

	Dates			
Skills To Be Evaluated	N	J	M	M
Life Science:				
1. Identify organisms based on needs				
2. Diagram structure and describe function				
3. Record relationship between organism and environment				
4. Answer questions on organism's needs				
5. Use 25 vocabulary words				
6. Discuss library book				
Earth Science:				
1. Locate physiographic features				
2. Interpret graphs to show temperature differences				
3. Locate N, S, E, and W				
4. Discriminate between latitude and longitude				
5. Sequence timing of events				
6. Measure temperature in different conditions				
7. Use 25 vocabulary words				
8. Discuss library book				
9. Record observations on paper				
Physics:				
1. Observe changes in experiments				
2. Predict what will happen				
3. Experiment to answer questions of cause and effect				
4. Measure 8 out of 10 substances				
5. Record experimental results				

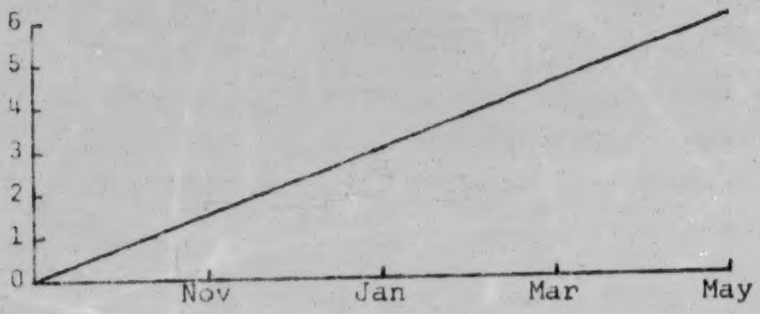
ACTIVITY CORRESPONDENCE TO OBJECTIVES

Grade 3

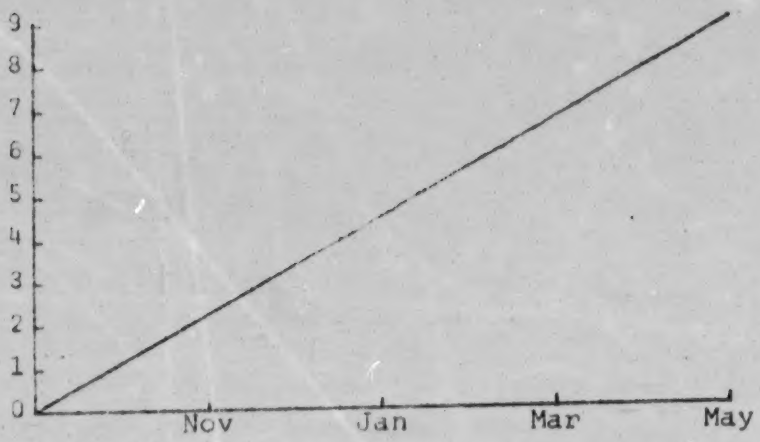
Obj.		Activities		
	A	B	C	D
Life Science				
1	1 2 3 4 5 6 7	1 3 4 5 6	1 3 4	1 6 7
2	2 3 4 7	3 4 5 6	2 3 5 6 7	2 3 4
3	2 3 5 6	3 4 5 6	1 3 4 7	5 6 7
4	2 3 4 7	1 2 7	1 4 7	1 3 5 6 7
5	Terminal			
6	Terminal			
Earth Science				
1	1 2 3 4 5 6	1 2 3 4 5 6 7	1 3 6	
2	4 6 7	1 2 3 4 5 6 7 8	3 6 7	
3	1 2 3 4 5 6	1 2 3 4 5 6 7		5 6 7
4	1 2 3 4 5 6	1 2 3 4 5 6 7	1 2 3	
5	7		2 3 5 6 7 8	2 3 4 5 6 7
6	4 6 7	1 2 3 4 5 6 7 8	1 3 6 7 8	1 5 6 7
7	Terminal			
8	Terminal			
9	Terminal			
Physical Science				
1	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	2 3 4 8	1 2 3 5
2	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	2 3 4 8	1 2 3 5
3	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 8	5 6 7 8
4		7	1 2 5 8	1 2 3 4 5 6 7 8
5	Terminal			

NAME ______________________________ GRADE 3

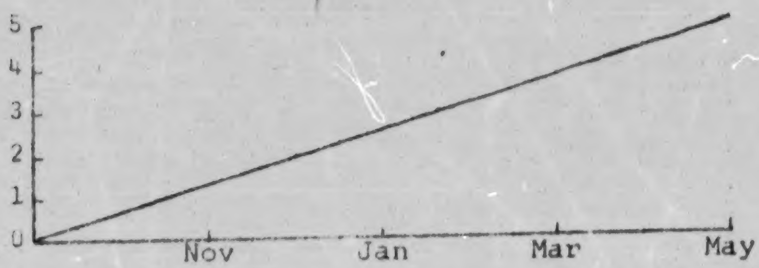
LIFE SCIENCE OBJECTIVES



EARTH SCIENCE OBJECTIVES



PHYSICAL SCIENCE OBJECTIVES



A.

Grade 4

Life Science	Earth Science	Physics
Pond Life	Earth Materials and Interior	Microscope
What do you think is in a pond?	Sizes: From planet to Atom. How big and how small can you imagine?	Magnifying with a Water Drop What does a lens do?
Algae What makes the water green?	Investigating Rocks and Minerals What are rocks made of?	Types of Microscopes Why do we have different types of microscopes?
Water Insects Do insects live in the water?	Elements in Minerals What is an element?	Looking at Pond Water What can you see with the microscope?
Protozoa What are protozoa?	Atoms and Molecules What is H_2O? What is H_2SO_4?	How to Measure Microorganisms How long is a protozoa?
Regeneration of Planaria Are planaria peculiar?	Conditions for formation Could you make a rock?	Living or non-living?
Plants Can plants live under water?	Volcanoes Do you ever blow your top?	What is a cell?
Interrelations Whose home is the pond?	Vt. Rocks and Minerals What is Vermont marble?	Larger organisms How many segments are there in a grasshopper's leg?
	Elements in the Atmosphere and Hydrosphere What is a cycle?	Stains Can you distinguish? the cell's nucleus?
FIELD TRIP Lake Iroquois		

B.

Grade 4

Life Science	Earth Science	Physics
What Makes Us Tick	Mountain Buildup and Breakdown	Photography
Skin How does our skin protect us?	The Globe Where are the mountains?	The Camera How does the camera work
Skeleton - Muscles What is your body framework?	Heights, Age of Mts. How old are the Appalachians?	Taking a picture What do you need to take a picture?
Digestion Where does your food go after you close your mouth?	Folding and Faulting Does the earth move?	Developing Will your picture come out?
Circulation Do you have good circulation?	How is a mountain built?	A New Look at Nature Have you photographed something from a new angle?
Lymphatic Diseases How does your body fight disease?	Igneous Rocks The Rock Cycle What is the rock cycle?	Sports & Photography Can you capture the action?
Nervous Why do we respond?	Erosion and Deposits What happens to eroded rocks?	Close up Photography How do you take close ups?
Sense Organs Have you any sense? Organs?	Fossils Where do you find fossils?	Patterns Can you photograph a pattern you see?
	Prehistoric Life Why did dinosaurs become extinct?	Shadows Can you photograph a shadow?
FIELD TRIP V & TB Assoc.		

C.

Grade 4

Life Science	Earth Science	Physics
Animal Adaptation	Stars and Stargazing	Electricity
Movement Do all animals move?	Stars What is a star?	Simple Circuit Can you light a bulb with a battery, bulb, and one wire?
Getting Food How do different animals get their food?	Using a telescope What can you see with a telescope?	What's inside a bulb?
Breathing Do we breathe like a fish?	The Sun How far is the sun?	What is a battery?
Reproducing Do all animals lay eggs?	Life History of a Star Will a star eventually burn out?	Using more than one bulb Series Parallel Can you light more than one bulb?
Senses How do we perceive the environment?	Star Pictures - Constellations Where is Big Bear?	Symbols What is a symbol?
Homes How are we adapted to our environment?	The Galaxy - Parts Particles How many stars are there in the sky?	Mystery boxes Can you figure out how the box is wired?
Communication Have you talked with a friend today?	What are stars made of?	Conductors and Insulators What is a conductor?
	Theories of Origin How did the universe begin?	Wires - Thick and Thin Does the thickness make a difference?
FIELD TRIP Looking For Tracks		

D.

Grade 4

Life Science	Earth Science	Physics
Nature Trail	Chemical Energy	Magnetism
Types of Trees What types of trees are in the school yard?	Chemicals in Rocks Are there chemicals in rocks?	Experimenting with magnets. What does it attract?
Drawing and Labeling Can you draw and label a plant?	Investigating Fire What is fire?	The Compass Why does the compass point north?
What is in the stream?	Distillation of Wood Can you break down wood chemically?	Making a magnet with electricity Can you make an electromagnet?
Pond Ecology Who lives in a pond?	Chemistry of a Star What elements are in a star?	Varying the Coil Does the number of coils make a difference in the strength of the magnet?
Forest Ecology Who lives in the forest?	Chemical Changes What happens in a chemical change?	Making a Buzzer Can you make a buzzer?
Field Ecology Who lives in the field?	Chemical Compounds: Atoms and Molecules What is a molecule?	Making a motor Can you make a motor?
Insects How many kinds of insects live around school?	Interrelations of Energy Forms Does energy change?	Making a meter Can you make a meter to measure your motor?
FIELD TRIP Mt. Mansfield Nature Center		

Grade 4

CALENDAR OF INSTRUCTIONAL ACTIVITIES

WEEK OF__________ UNIT___________

Sept.	Nov.	Jan.	Mar.
Life Pond Live (1)	What Makes Us Tick?	An. Adapt.	Nature Trail Classif.
Physics Microscope	Photography	Electricity	Magnetism
Earth The Earth Materials & Interior	Mt. Building & Breakdown	Stars & Star Gazing	Chem. Energy

PHYSICAL SCIENCE MINIMUM OBJECTIVES - Grade 4

Condition	Behavior	Criteria
1. Given lenses and several different types of microscopes	the student will observe and identify	5 specimens with 80% accuracy.
2. Given microslides	the student will draw 1 structure	with 2 out of 4 functioning parts accurately.
3. Given lenses, microscopes, cameras and diagrams	the student will answer questions of deduction about the relations of the lens to the bending of light rays in producing an image	with 80% accuracy.
4. Given electrical materials	the student will experiment to the point of discovery that a complete circuit requires a circle of conductors	with 100% accuracy.
5. Given materials on electricity and magnetism	the student will set up and describe the use of 1 energy form	in 2 common problems.
6. Given a physical science unit	the student will sequence 10 objects in order of size and one other criterion of his own classing	with 100% accuracy.
7. Given a physical science unit	the student will experiment to find the answer to 3 questions of cause and effect	with 100% accuracy.
8. Given a physical science unit	the student will record by tape, paper, or manipulative materials his results from exploration	at least 80' of the time.

Systems of Evaluation
Physical Science
Grade 4

1. Given lenses and several different types of microscopes the student will observe and identify 5 specimens with 80% accuracy.

Students Specimens: Check + if completed successfully

2. Given microslides the student will draw one structure with 2 out of 4 functioning parts accurately.

Student will diagram in notebook.
Teacher check when completed.

Student **Successfully Completed**

3. Given lenses, microscopes, cameras, and diagrams	the student will deduce the relation of the lens to the bending of light rays in producing an image	with 80% accuracy.

1. Given the following diagram the student will draw light rays through a lens from a light source.

1.

2.

3.

4. Do you need light to produce an image through a lens?

5. What would you do to increase magnification?

4. Given electrical materials	the student will experiment to the point of discovery that a complete circuit requires a circle of conductors	with 100% accuracy.

Students will record results of experimentation in notebook.

Student	Date Completed

5. Given materials on electricity and magnetism	the student will set up and describe the use of one energy form	in 2 common problems.

Question: On the basis of your experiment, how is it related to our common problems?

Oral evaluation

Student	Experiment	1 energy form in 2 common problems Description

Physical Science

Grade 4

6. Given a physical science unit	the student will sequence 10 objects in order of size and one other criterion of his own choosing	with 100% accuracy

Check + if completed successfully.

Student	Chosen Criterion	Sequencing Size

7. Given a physical science unit	the student will experiment to find the answer to three questions of cause and effect	with 100% accuracy.

Evaluation:
Teacher observation of child's experiment:
Check + if experiment answers questions of cause and effect.

Experiment:

1. Does he answer questions of cause and effect? ______________

8. Given a physical science unit	the student will record by tape, paper, or manipulative materials his results from exploration	at least 80% of the time

Experiment	Type of Record
(i.e., Heating Sugar)	(written)

EARTH SCIENCE MINIMUM OBJECTIVES - Grade 4

Condition	Behavior	Criteria
1. Given data on changes in earth science	the student will make predictions based on past evidence	with 80% accuracy.
2. Given demonstrations of physical changes in earth science	the student will record at least 4 out of 5 changes	with 80% accuracy.
3. Given materials and models in the classroom	the student will describe and illutrate using models the movements of the actual material	with 80% accuracy.
4. Given exploration of materials and experiments with changes	the student will recognize and record	4 out of 5 different effects caused by the rate of change (i.e., crystallization)
5. Given experiments on energy forms	the student will interpret verbally the interrelationship between matter and energy	in 2 instances with 80% accuracy.
6. Given the dimensions of astronomical bodies	the student will estimate numbers and sizes and consequently accept the idea of approximation	as judged close enough by the teacher.
7. Given a unit in Earth Science	the student will read and discuss	at least 3 major points of a library book on the subject.
8. Given the unit on earth science	the student will recognize and use in description	30 new vocabulary words with 95% accuracy.

Systems of Evaluation
Earth Science
Grade 4

1. Given data on changes in earth science	the student will make predictions based on past evidence	with 80% accuracy.

Predict what will happen on the basis of the following evidence:

Meteorologic Data: (Samples)

1. There have been tornadoes in June in Texas every year from 1960-1970. What do you expect to happen in the next 10 years?

2. The average annual precipitation in Vermont is . How much precepitation do you expect next year on the average?

Astronomical Data:

3. The new moon came Jan. 12, 1950; Jan. 14, 1951; Jan. 17, 1952; Jan. 19, 1953; Jan. 21, 1954. When do you expect a new moon in Jan. 1956?

2. Given demonstrations of physical changes in earth science	the student will record 4 out of 5 changes	with 80% accuracy.

Student chooses 5 demonstrations.
A. Experiment - Heating sulfur and iron.

B. Experiment - Heating Sugar to get carbon.

C. Model - Faulting and folding

D. Demonstration - Electrolysis of water.

E. Diagram - Inside of Volcaro

F. Sedimentary rocks and fossils

G. Spectroscope - observation

H. Telescopic observation of astronomical movements

I. Distillation of wood

J. Breaking up compounds - (i.e. apple)

3. Given materials and models in the classroom	the student will describe and illustrate using models the movements of the actual material	with 80% accuracy.

Observation by Teacher

Check List

Student ______________________________

Material Used	Described Movements
rocks	
sand	
models	
volcano	
fault	
fold	
the globe	
diagrams	
fossils	
telescope	
experiments	

4. Given exploration of materials and experiments with changes	the student will recognize	4 out of 5 different effects caused by the rate of change ((i. e., crystallization)

How does the rate of change differ in an experiment?

Experiment	Condition	Rate of Change
1. Crystallization	Hot Cold	
2. Pendulums	long short	
3. Burning	open closed	
4. Erosion	wind no wind	
5. Electrolysis	catalyzed not catalyzed	
6. Pendulums	heavy light	
7. Crystallization	seeded not seeded	
8. Burning	paper wood	

5. Given experiments on energy	the student will interpret the interrelationship between matter and energy	in 2 instances with 80% accuracy.

After doing at least 2 experiments, the student will draw conclusions orally or on paper.

Samples
Sun Light
Stars
Bombs Heat

Chemicals Light
Electricity Heat

Machines Sound
Heat

Possible Activities

Inv. fire
Distill. of wood
Chem. changes
Chem. cmpds.
Inter. of energy
Inv. rods minerals
Igneous rocks
What is a star
The Sun
What are stars made of?

How can you relate the production of energy to the matter you are working with?

6. Given the dimensions of astronomical bodies	the student will estimate numbers and size and consequently accept the idea of approximation.

How did you make your estimate

1. How many peas are in the jar?
2. How many starts are in the sky?
3. How many stars are in a galaxy?
4. How big is the moon?
5. How big is the sun?

7. Given a unit in earth science	the student will read and discuss	at least 3 major points of a library book on the subject.

Oral Evaluation:

8. Given the unit on earth science	the student will recognize and use in description	30 new operational vocabulary words with 95% accuracy.

LIFE SCIENCE MINIMUM OBJECTIVES - Grade 4

Condition	Behavior	Criteria
1. Given representatives of different ecological communities	the student will classify the types of organisms and the types of environments	with 80% accuracy.
2. Given a biological environment in the classroom	the student will recognize and describe the interdependence of the organisms with their environment	with 80% accuracy.
3. Given problems concerning the environment	the student will hypothesize	about 3 out of 5 possible solutions to the problems.
4. Given information about organisms and the environment	the student will observe, read about, and answer questions orally or written about the relation of structure to function in 8 out of 10 organisms	with 80% accuracy.
5. Given information about organisms and their environment	the student will answer questions of deduction about the relation between structure and function as a causative factor in its adaptation to its environment	with 80% accuracy.
6. Given organisms in the classroom and school grounds	The student will analyze quantitatively the size and type of population within the immediate environment	with 80% accuracy.

Condition	Behavior	Criteria
7. Given a life science unit	the student will read and discuss	at least three major points from a library book related to the unit.
8. Given a life science unit	the student will recognize and use in description at least 30 new operational vocabulary words	with 95% accuracy.

Systems of Evaluation
Life Science
Grade 4

1. Given representatives of different ecological communities the student will classify the types of organisms and the types of environments with 80% accuracy.

Group the following organisms into their common habitat:

Habitats

- A Pond
- B Field
- C Forest
- D Sea
- E Village

Organisms

- adult salamander
- grasshopper
- dandilions
- swordfish
- whale
- waterstrider
- algae
- dog
- man
- chipmunk

2. Given a biological environment in the classroom the student will recognize and describe the interdependence of the organisms with their environment with 80% accuracy as judged by the teacher.

Suggested oral questions.

1. How does the (organism) get food in its natural surroundings?
2. Can you think of any factors in the environment which could keep the (organism) from reproducing.
3. How does the (organism) get water?
4. How does the (organism) respond to various stimuli (choose 1 or 2 stimuli)?
5. How is the (organism) adapted to moving in his environment?

3. Given problems concerning the environment	the student will hypothesize	about 3 out of 5 possible solutions to the problems

Tape discussion of major environmental problems.

A. Litter
B. Sewage disposal
C. Water pollution
D. Air pollution
E. Soil Conservation
F. Forest Conservation
G. Conservation vs. Recreation
H. Population

The student can hypothesize on reverse side of tape or on paper.

4. Given information about organisms and the environment	the student will read about and observe the relation of structure to function	in 8 out of 10 parts.

Relate the proper part to the function it accomplishes in a diagram of the organ or organism.

Functions to consider:

- Water to cells
- Food to cells
- Getting rid of waste
- Reproduction
- Responsiveness to environment
- Breathing
- Movement (cellulos and organism)

Possible Diagrams

- Human body
- Crayfish
- Insect
- Single celled organism
- Plant
- Tree

5. Given information about organisms and their environment	the student will deduce	the relation between structure and function as a causative factor in its adaptation to its environment.

Suggested procedure:
oral evaluation:
Discuss the organism studied in terms of its adaptations.

1. Why is the (organism) (structure) adapted in its (special way) for each (life activity, function)

food and water
reproduction
responsiveness
getting rid of water

I. E. Why do you think the woodpecker has its particular type of beak?

6. Given organisms in the classroom and school grounds	the student will analyze quantitatively the size and type of population in the immediate environment	with 80% accuracy.

Using the ant farm, fruit fly jar, terrarium, or sample square plot in the school yard, count and record the number of organisms of a specific type. Record all other observations made at the time. Do this at two different times.

Organism: ____________________

Number: ____________________

Date: ____________________

Other observations: ____________________

____

____

Do you think this is a large population at this time? ____________

How do the numbers of this population compare to the numbers of other organisms with which you are familiar? ____________________

7. Given a life science unit	the student will read and discuss	at least three major points from a library book related to the unit.

Oral Evaluation:

8. Given a life science unit	the student will recognize and use in description	at least 30 new operational vocabulary words with 95% accuracy.

Each student will keep a notebook in which he can put new words as they are presented.

EVALUATION CHECKLIST Grade 4

STUDENT ____________________________________

(Mark ✓ when ready/+ if successful completion
→ if needs re-evaluation)

Skills To Be Evaluated	Dates			
	N	J	M	M
Physical Science:				
1. Observe and identify specimens				
2. Draw micro organisms				
3. Answer questions about light and lenses				
4. Experiment with circuits				
5. Set up an experiment and describe the energy transformation				
6. Sequence objects				
7. Experiment for cause and effect				
8. Record results				
Earth Science:				
1. Make predictions				
2. Record changes				
3. Describe using models				
4. Record effects caused by rate of change				
5. Interpret results from experimentation				
6. Estimate numbers and sizes				
7. Discuss library book				
8. Use 30 vocabulary words				
Life Science:				
1. Classify organisms in environments				
2. Describe interdependence				
3. Hypothesize				
4. Answer questions about relation of structure and function				
5. Answer questions about adaptation				
6. Analyze size and types of populations				
7. Discuss library book				
8. Use 30 vocabulary words				

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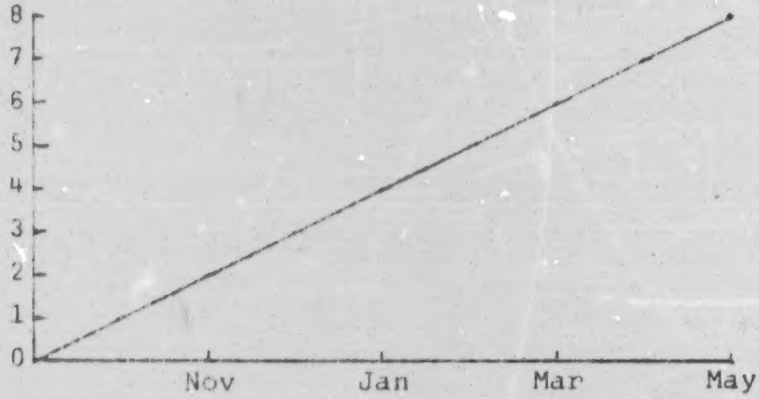
ACTIVITY CORRESPONDENCE TO OBJECTIVES

Grade 4

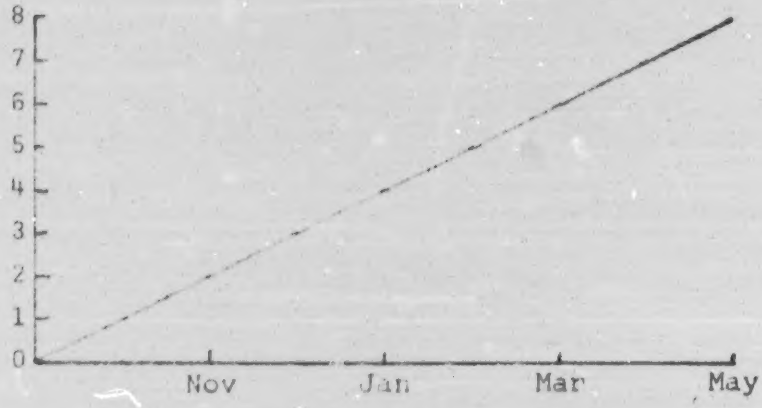
Obj.	Activities			
	A	B	C	D
Life Science				
1	1 2 3 4 6 7		1 2 3 4 5 6 7	1 2 4 5 6 7
2	2 3 4 5 6 7	1 2 3 4 5 6 7	1 2 3 4 5 6 7	
3	6 7	5 6 7	4 5 6 7	3 4 5 6 7
4	2 3 6	1 2 3 4 5 6 7	1 2 3 4 5 6 7	1 2 8
5	2 3 6	1 2 3 4 5 6 7	1 2 3 4 5 6 7	1 2 8
6	2 3 4 6 7			1 2 3 4 5 6 7 8
7	Terminal			
8	Terminal			
Earth Science				
1	5 6 7	2 3 4 5 6 7 8	3 4 7 8	1 4 5
2	2 3 4 5	2 3 4 5 6 7 8	3 4 7 8	1 4 5
3	2 3 4 6	1 2 3 4 5 6	3 5 7	4 6
4	5 6 7		1 2 3 4 7	1 2 3 4 5 6
5			1 2 3 4 5 6 7 8	1 2 3 4 5 6 7
6	1 8		1 2 3 4 5 6	1 4 6
7	Terminal			
8	Terminal			
Physical Science				
1	1 2 3 5 6	2 4 5 6 7 8		
2	1 3 6 7	1 2 3 6		
3	2	1 2 3 4 5 6 7 8		
4			1 2 3 4 5 6 7 8	1 2 3 4 5 6 7
5			1 2 3 4 5 6 7 8	1 2 3 4 5 6 7
6	4 5 7	4 5 7 8	1 2 3 4 5 6 7 8	1 3 4
7	Terminal			
8	Terminal			

STUDENT ______________________ GRADE 4

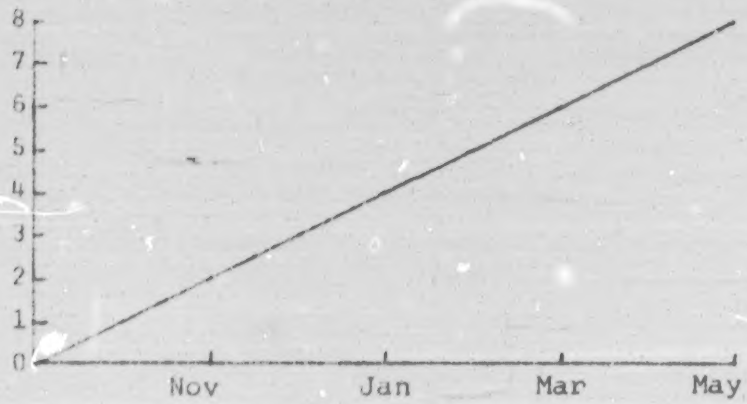
LIFE SCIENCE OBJECTIVES



EARTH SCIENCE OBJECTIVES



PHYSICAL SCIENCE OBJECTIVES



SCIENCE DATA SHEET
UNIT: EARTH SCIENCE

Gr. 5-6

Students	Weekly Objectives							
	1	2	3	4	5	6	7	8

SCIENCE DATA SHEET
UNIT: Elements in Weather

Gr. 5-6

Students	Weekly Objectives								Weekly Experiment Eval.							
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8

PROGRAM EVALUATION

Unit Objective: Correspondence to Overall Basic Elementary Science Objective

		Life	Earth	Physics
1. Observation	1	1 2	1 5	1 3
	2	1 2 3		2
	3	1 3 4	1 3 4 9	
	4	1 4	4	1 6
2. Hypothesis	1	3	2	5
	2		1	4
	3			2
	4		1	
3. Experimenting	1	4	2	2 4 7
	2		2	1 3
	3			1 3
	4		3	4 5 7
4. Recording and Analyzing Results	1	3 5	5	6
	2	4 5	3 4	5
	3	2 3	2 5 6 9	4 5
	4	6	2 4 6	2 5 8
5. Drawing Conclusions	1	6	3	1
	2			2 3
	3	2 4		
	4	2 5	5	3
6. Research Language	1	7 8	4	
	2	6 7	5 6	
	3	5 6	7 8	
	4	7 8	7 8	

SCIENCE EVALUATION

In science, just as it is possible to reach an objective through alternatives in subjects of differing interests, it is possible, and in fact essential, to evaluate individual students in differing ways for the same objective.

The following is a list of the range of evaluation techniques which may be effectively employed for individual students for specific objectives.

Hopefully, all students at sometime during the year will be evaluated by all techniques.

SUGGESTED METHODS OF EVALUATING SCIENCE OBJECTIVES

Questions

Written
Oral
By demonstration of manipulative materials

Notebook

Diagrams
Data
Results & conclusions
Written Questions

Experiment or Activity

Construction of model or other apparatus
Setting up experiment
Carrying through experiment
Analyzing difficulties

Discussion or Dialogue

Student initiated ideas or hypotheses
Use of operational vocabulary
Originality
Teacher initiated ideas picked up on

Reading and Research

Resources used
Applies (or relates) reading to work

Note To Teachers

All words in parentheses should be substituted by the actual material, organism, or idea the particular student is working with.

I.e., (this structure) may refer to ice, shadows, clay, tables, etc.

LIFE SCIENCE DATA SHEET

Record date objective is accomplished.

Grade______

	OBJECTIVES								
STUDENT	1	2	3	4	5	6	7	8	9

EARTH SCIENCE DATA SHEET

Record date objective is accomplished.

Grade______

	OBJECTIVES								
STUDENT	1	2	3	4	5	6	7	8	9

PHYSICAL SCIENCE DATA SHEET

Record date objective is accomplished.

Grade______

	OBJECTIVES								
STUDENT	1	2	3	4	5	6	7	8	9

SCIENCE DATA SHEET

Week________

Grade_____

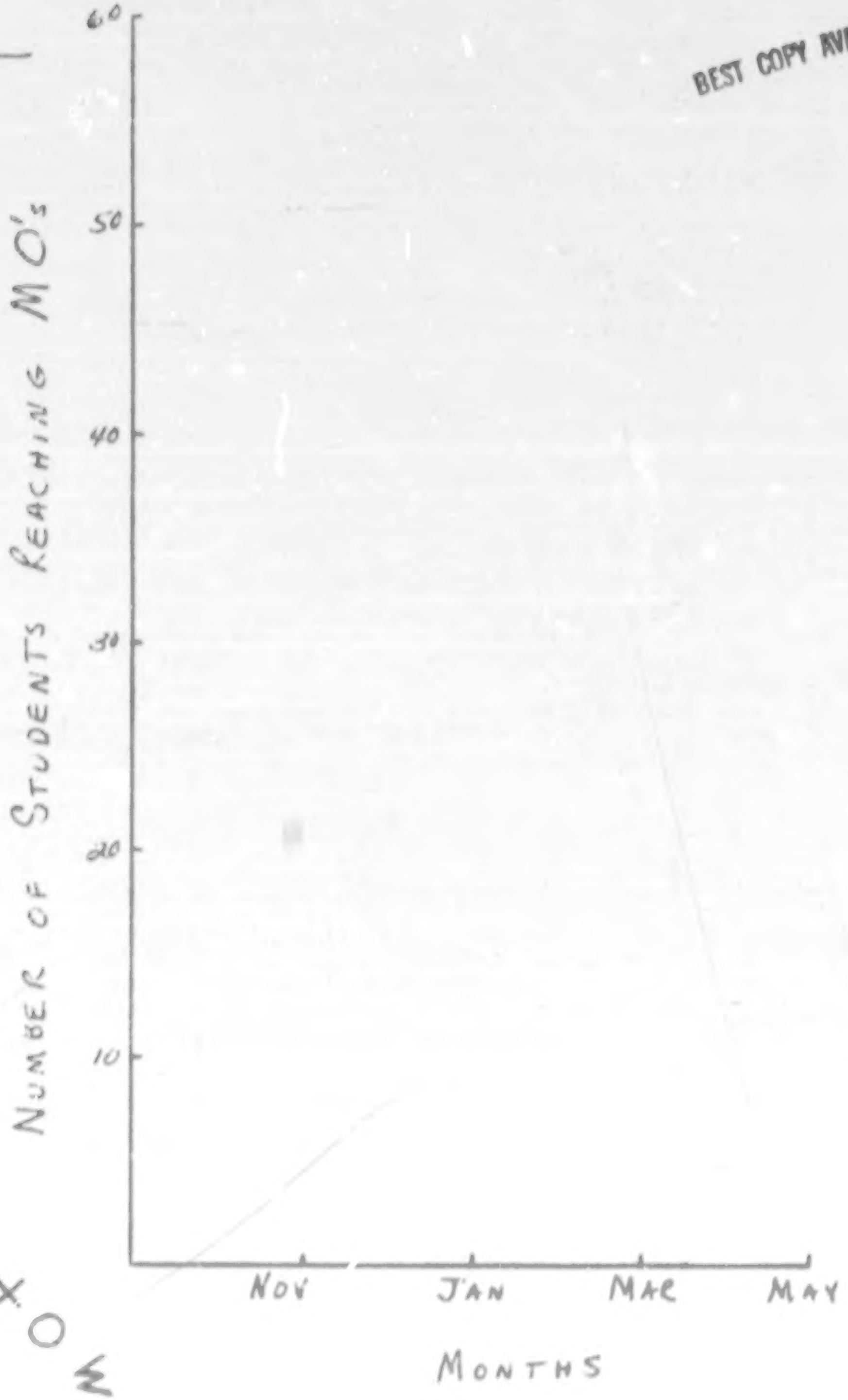
	ACTIVITIES		
STUDENT	LIFE	PHYSICAL	EARTH

BASIC ELEMENTARY SCIENCE

GRADE ____

LIFE SCIENCE

NO. STUDENTS ____



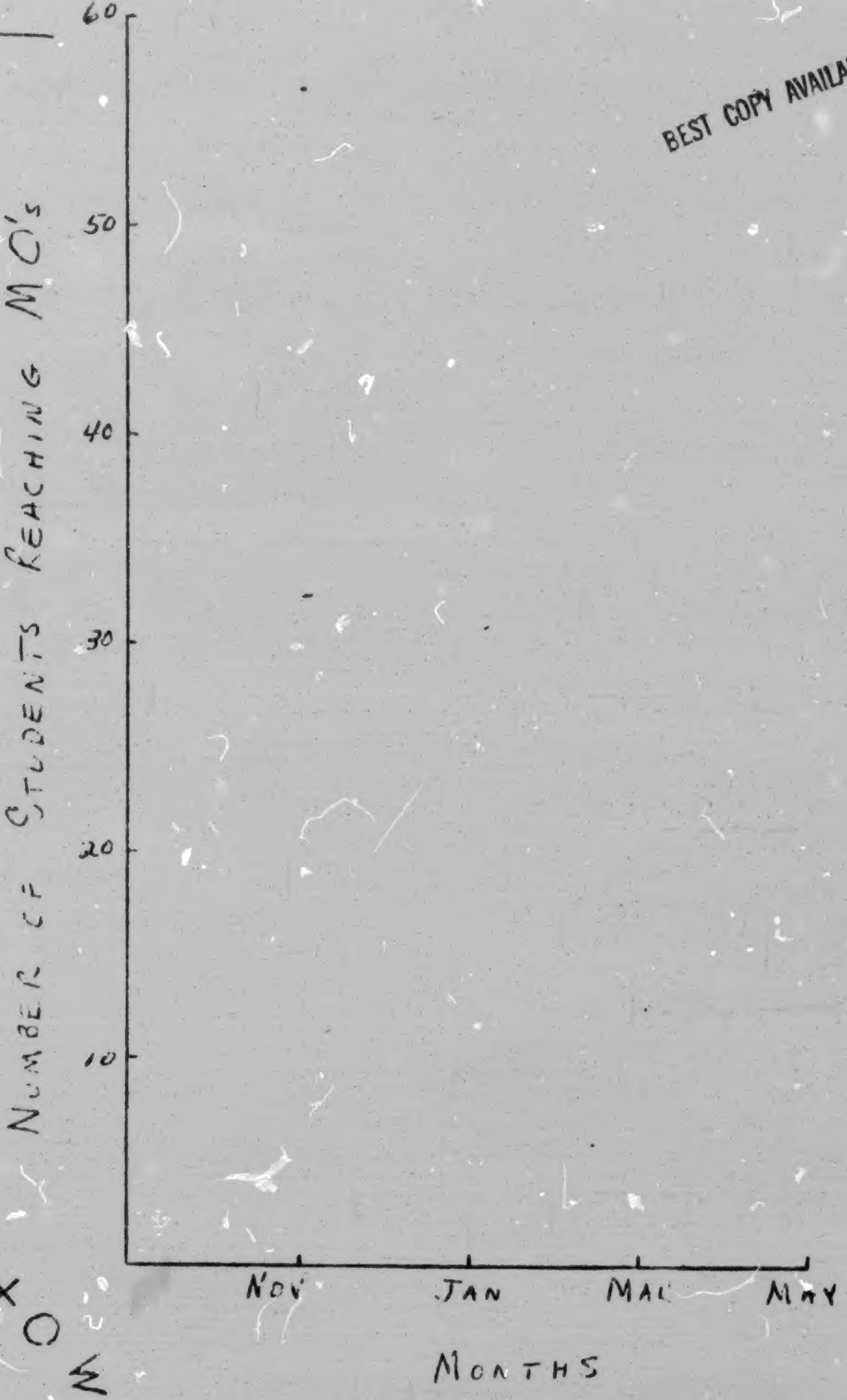
OBSERVATION X
HYPOTHESIS O
EXPERIMENTING ξ
RECORDING AND
ANALYZING RESULTS ■
DRAWING CONCLUSIONS Δ
READING AND RESEARCH Φ

BASIC ELEMENTARY SCIENCE

GRADE ____

EARTH SCIENCE

NO. STUDENTS ____



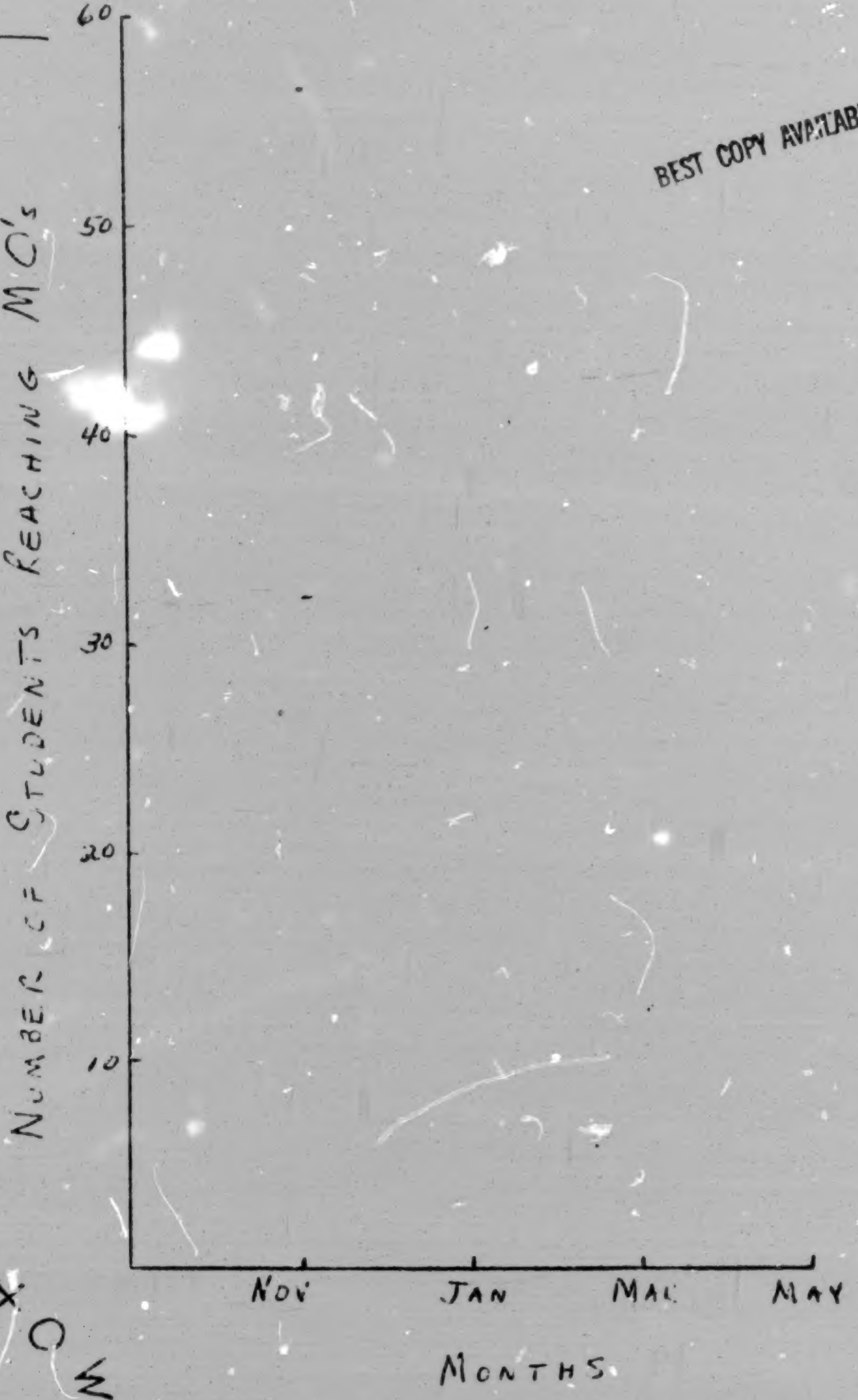
OBSERVATION X
HYPOTHESIS O
EXPERIMENTING Σ
RECORDING AND
ANALYZING RESULTS ■
DRAWING CONCLUSIONS △
READING AND RESEARCH Φ

BASIC ELEMENTARY SCIENCE

GRADE ____

EARTH SCIENCE

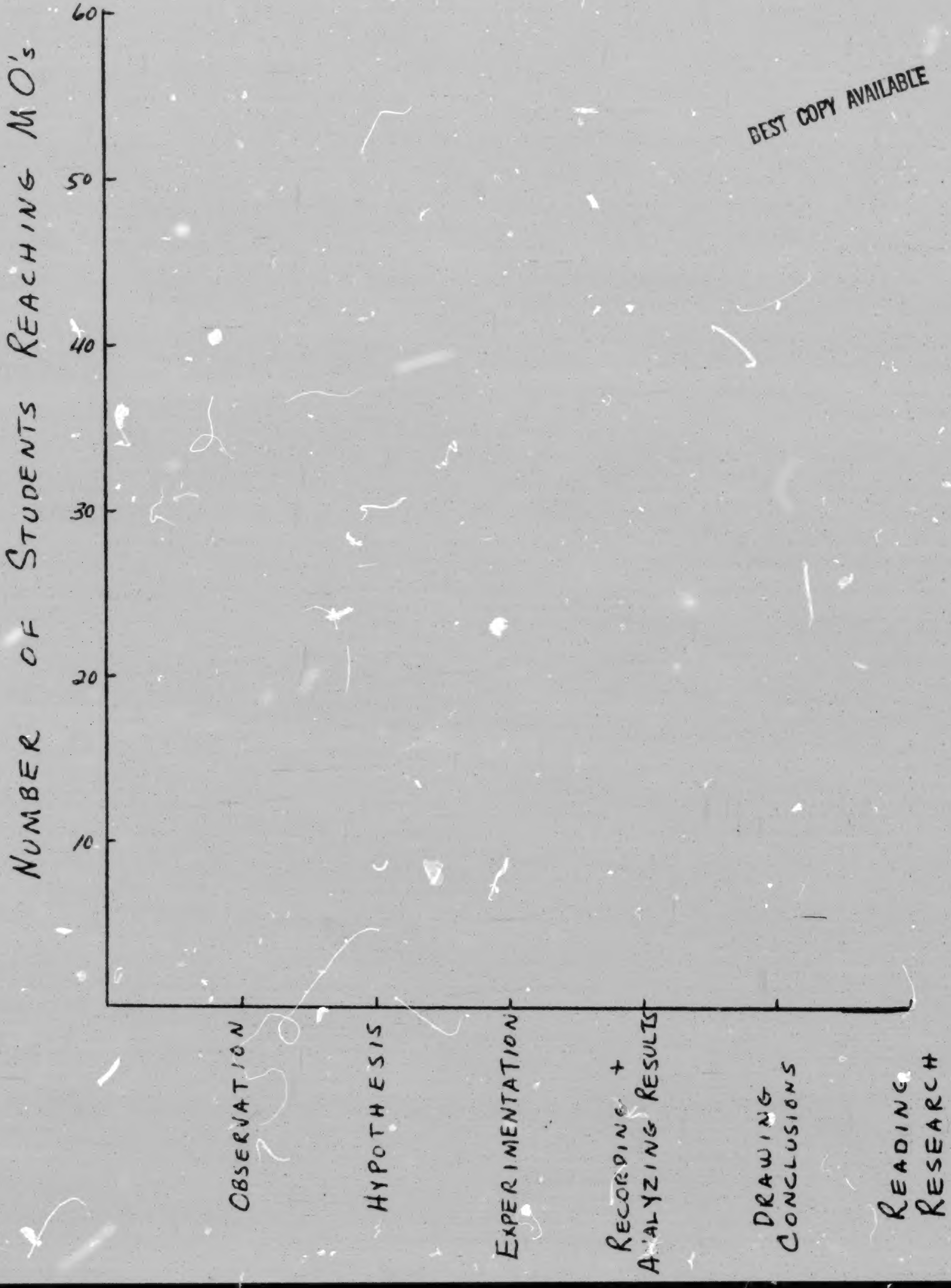
NO. STUDENTS ____



OBSERVATION X
HYPOTHESIS O
EXPERIMENTING ξ
RECORDING AND
ANALYZING RESULTS ■
DRAWING CONCLUSIONS Δ
READING AND RESEARCH Φ

BASIC ELEMENTARY SCIENCE OBJECTIVES

GRADE ___ TOTAL NO. STUDENTS ___



PHYSICAL EDUCATION MINIMUM OBJECTIVES

Tom Carlson

PHYSICAL EDUCATION MINIMUM OBJECTIVES

ACTIVITY: Games of Low Organization

GRADE LEVEL: K-2

Through games of low organization, children have the opportunity to develop fundamental skills and to begin an understanding of the application of rules and regulations to the play of group games.

Conditions	Behavior	Criteria
1. Given the following locomotor games: 1. Stop and Start 2. Red Light 3. Follow the Leader and others	the child will walk	with the body weight directly over the feet, the back straight, the shoulders back, swinging the legs from the hip, bending the knees, pushing off from the toes, with the feet parallel and the toes pointed ahead, and with the arms swinging freely at the side in a cross-patterned action with the legs.
2. Given the following locomotor games: 1. Run for Your Supper 2. Stop and Start 3. Catch the Cane 4. Drop the Handkerchief and others	the child will run	by placing the left foot in advance of the right and leaning forward at about a 20° angle forming a 90° angle between the upper arm and forearm, swinging the arms in a cross-patterned action with the legs, bringing the knees up to waist height, striding forward one foot in front of the other in a straight line and closing the hands without clenching them.

Conditions	Behavior	Criteria
3. Given the following locomotor games: 1. I Spy 2. Numbers Change 3. Hop Relay	the child will hop on one leg	by standing on one foot, bending the opposite leg at the knee with the foot held in the air, springing up and down on one foot, and balancing the body with the arms and the unsupported leg.
4. Given the following locomotor games: 1. Jump the Shot 2. Jack Be Nimble 3. Follow the Leader	the child will jump	by standing with both feet together, springing from the toes, jumping forward into the air and landing with both feet together with the knees bent.
5. Given the following locomotor games: 1. Jump the Shot 2. Jack Be Nimble 3. Follow the Leader	the child will leap	by starting with the feet together, springing forward with one foot as the opposite leg propels the body forward and upward, using the arms to provide additional lift off the ground and for body balance while in the air and landing on the opposite foot with the knee bent and the body weight forward.
6. Given the following locomotor games: 1. Stop and Start 2. Red Light and Others	the child will gallop	by placing one foot forward, bringing the rear foot up to the heel of the front foot, stepping again with the forward foot and then repeating the process.

Conditions	Behavior	Criteria
7. Given the following locomotor games: 1. Stop and Start 2. Red Light and Others	the child will slide	by stepping sideward to the right with the right foot, sliding or drawing the left foot to the side of the right foot, shifting body weight to the left foot, step again with the right foot and repeat. To reverse direction step sideward with the left foot first.
8. Given the following locomotor games: 1. Stop and Start 2. Come Along and Others	the child will skip	by stepping forward with either foot, hop in the air on this foot, use the arms as an aid in getting height and balance and then step forward with the opposite foot to repeat the action of a step, hop.
9. Given the following chasing and fleeing games: 1. Various tag games 2. Fox and Squirrels 3. Spider and Flies and others	the child will	being able to move in any direction--sideward, forward, backward, up and down; keeping body balance at all times and be able to recover after moving in one direction and come back to original balance, ready for the next movement.

Conditions	Behavior	Criteria
10. Given the following throwing and catching games: 1. Throw and Catch 2. Call Ball and Others	the child will throw a ball with two hands underhand	while standing with both feet apart, knees bent slightly, grasping the ball with the fingertips at each side, carrying the ball back between the knees, arms extended, then swinging the arms in a forward arc, straighten the legs, release the ball, and follow through
11. Given the following throwing and catching games: 1. Throw and Catch 2. Battle 3. Team Dodge	the child will throw the ball with two hands from the shoulder	while standing sideways, feet apart, forward foot pointed in the direction of the throw, grasping the ball with the fingertips at each side, carrying the ball above and slightly behind the rear shoulder, and then swinging the arms forward in the direction of the target, releasing the ball at arms length and following through.
12. Given the following throwing and catching games: 1. Dodgeball 2. Keep Away 3. Throw and Catch and others	the child will catch the ball with two arms	while standing in a stride or straddle position with knees slightly bent, eyes focused on the ball, arms flexed at the elbows, palms up, and then closing the arms around the ball as it touches the body.

Conditions	Behavior	Criteria
13. Given the following throwing and catching games: 1. Throw and Catch 2. Call Ball 3. Circle Stride Ball and others	the child will catch the ball with two hands	by stepping forward with either foot to meet the ball, hands and arms are in front of the body, elbows slightly bent (when the ball is above the waist, catch with palms forward, fingers pointing up, when below the waist, catch with palms forward, fingers down) and as the ball is caught, draw the hands back towards the body.
14. Given the following throwing and catching games: 1. Throw and Catch 2. Dodge Ball 3. Attack and others	the child will throw the ball with one hand underhand	by holding the ball in the throwing hand, gripping with the fingers with the palm up, standing with the feet apart with one foot forward keeping the eye on the target, stepping forward with the rear foot; with the stepping motion, the arm is brought in back of the body, the elbow straight, and the hand below the waist. The rear foot touches the ground, the throwing arm is brought forward with the elbow straight and the hand below the waist and as the arm swings forward, the ball is released and the motion is finished in an upward swing as the body weight is transferred to the forward foot.

Conditions	Behavior	Criteria
15. Given the following throwing and catching games: 1. Throw and Catch 2. Keep Away 3. Dodge Ball and others	the child will throw overhand	by holding the ball in the throwing hand and gripping the ball in the fingers, standing with the feet apart with one foot forward, keeping the eye on the target stepping forward with the rear foot while bringing the arm in back of the body over the rear shoulder. As the foot touches the ground, the throwing arm is brought forward at head height or higher with the elbow bent. The arm is straightened as the fingers release the ball towards the target and the body weight is transferred to the forward foot.

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PHYSICAL EDUCATION | GAMES OF LOW ORGANIZATION GRADE - K - 1 - 2

OBJECTIVES - DATE CRITERIA MET

NAME	1	2	3	4	5	6	7	8	9	10	11

GAMES OF LOW ORGANIZATION GRADE - K - 1 - 2

OBJECTIVES - DATE CRITERIA MET

NAME	12	13	14	15							

PHYSICAL EDUCATION MINIMUM OBJECTIVES

ACTIVITY: Table Tennis

GRADE LEVEL: 4-8

Table tennis is not only an enjoyable sport, but it also greatly increases reflex speed and eye-hand coordination as the basic skills are mastered.

Conditions	Behavior	Criteria
Given instruction by the teacher and practice	the student will demonstrate the following skills: 1) serve 2) volley 3) chop 4) smash	at a level determined adequate by the teacher
Given instruction by the teacher	the student will demonstrate a knowledge of the following rules: 1) correct paddle hold 2) table boundaries 3) doubles play	at a level determined adequate by the teacher

TABLE TENNIS GRADE - 4 - 5 - 6 - 7 - 8
OBJECTIVES - DATE CRITERIA MET

NAME	SKILLS					RULES						
	SERVE	VOLLEY	CHOP	SMASH		PADDLE HOLD	BOUNDARIES	DOUBLES PLAY				

PHYSICAL EDUCATION MINIMUM OBJECTIVES

ACTIVITY: Softball

GRADE LEVEL: 3-8

Conditions	Behavior	Criteria
Given instruction by the teacher and practice	the student will throw the ball over hand	(right handed thrower) by: 1) pivoting, rotating the body to the right and shifting the weight to the right foot 2) swinging the throwing arm upward and backward 3) stepping forward in the direction of the throw with the left foot 4) rotating the hips, the trunk, and the shoulders to the left while retracting the throwing arm to the final position before starting the forward arm action 5) swinging the right elbow forward horizontally, extending the forearm and snapping the wrist just before releasing the ball 6) continuing the pattern of movement in the follow-through
Given instruction by the teacher and practice	the student will catch the ball in the gloved hand	while reaching for the ball with elbows bent and pointing downward, the hand positioned to stop and grasp the ball, w while the force of the ball is diminished by a giving action by the wrist, elbow and shoulder
Given instruction by the teacher and practice	the student will bat (or strike) the ball	by stepping in the direction of the ball, rotating the hips and spine forward, and uncocking the arms and wrists at impact

Given instruction by the teacher and practice	the student will field the ball	with the feet well apart, knees flexed and the torso bent at the waist, the glove is rested upon the ground and lifted upward only if the ball bounces up
Given instruction by the teacher and practice	the student will orally name the regulation dimensions of the field of play as well as the players and their positions	with 100% accuracy when asked by the teacher
Given instruction by the teacher	the student will name orally the basic rules and regulation of the game	with 100% accuracy when asked by the teacher

PHYSICAL EDUCATION MINIMUM OBJECTIVES

ACTIVITY: Basketball

Grades 3-5 learn the basic skills on "biddy" baskets which are eight feet high as compared to the regulation basket which is ten feet high. Grades 6-8 use the regulation baskets.

Biddy Basketball - Grades 3-5

Biddy basketball for these grade levels primarily entails rudimentary skills of shooting, passing, and dribbling. The length of time that must be spent practicing these skills precludes the teaching of game situations at this age.

Conditions	Behavior	Criteria
Given instruction, practice, and a basketball	the student will dribble	while keeping the fingers spread as far apart as possible and pushing the ball toward the floor with the fingertips
Given instruction, practice, and a basketball	the student will pass the ball	with two hands, bringing the ball back to the chest, stepping forward and snapping the wrists at the time of release
Given instruction by the teacher, practice, and a basketball	the student will shoot the ball	keeping the ball on the fingertips and releasing using one smooth motion of the fingers, hand, and wrist
Given line and circle relays	the student will practice the skills listed above	with sufficient repitition that will enable the skills to be mastered

Basketball - Grades 6-8

In grades six through eight, the emphasis is upon integrating skills and rules into game situations.

Conditions	Behavior	
Given instruction by the teacher	the student will name orally the names and positions of all players	with 100% accuracy as judged by the teacher
Given instruction by the teacher	the student will explain orally the following rules: 1) out of bounds 2) lane violations 3) five-second rule 4) travelling 5) double dribble 6) scoring 7) changing pivot foot 8) excessive use of elbows 9) holding 10) blocking 11) offensive charging	with 100% accuracy as judged by the teacher
Given instruction and practice	the student will demonstrate the following skills: A. Passing 1) two hand chest pass 2) two hand bounce pass 3) two hand overhand pass 4) pass off dribble B. Dribbling 1) standing 2) running 3) changing hands C. Shooting 1) lay up 2) one hand set(or jump) shot D. Pivoting 1) with both feet on floor 2) while on one foot 3) after receiving ball with both feet in air E. Faking 1) with and without ball 2) to receive in bounds pass 3) to work into position for offensive pass or shot	at a skill level determined satisfactory by the instructor

BASKET BALL GRADE - 3 - 4 - 5

OBJECTIVES - DATE CRITERIA MET

NAME	DRIBBLE	PASS	SHOOT	PRACTISE + MASTERY								

	F. Defense 1) weight on balls of feet, leaning forward 2) one hand in air 3) slide and prevent ankles from crossing 4) keep hands moving	
	G. Rebounding 1) block out opposing player 2) proper timing on jump 3) proper out let pass	
Given instruction and practice	the student will demonstrate all of the above skills as will as 1) knowledge of position play 2) teamwork	in game situations at a skill level determined by the teacher
Given instruction by the teacher	the student will demonstrate proper loosening and warm-up exercises (See enabling objective "A" under CROSS-COUNTRY)	before participating in skills or games

BASKETBALL GRADES 6 - 7 - 8

OBJECTIVES - DATE CRITERIA MET

NAME	POSITIONS	RULES	PASSING	DRIBBLING	SHOOTING	PIVOTING	FAKING	DEFENSE	REBOUNDING	SKILLS + KNOWLEDGE	WARM-UP EXERCISES	

PHYSICAL EDUCATION MINIMUM OBJECTIVES

ACTIVITY: Team Handball

GRADE LEVEL: 4-8

Team handball is played on a basketball court with hockey nets for goals. The ball is a playground ball about 1½ times the size of a softball. The sport involves dribbling, passing, and shooting the ball into the hockey nets.

Conditions	Behavior	Criteria
Given instruction by the teacher	the student will demonstrate the following skills: 1) dribbling 2) passing 3) shooting	under game conditions at a level determined adequate by the teacher
Given instruction by the teacher	the student will orally explain the following rules of the sport: 1) Ball may be advanced by passing, dribbling or running 2) Player in possession of ball may take three steps or three dribbles, but not both. 3) Offensive players may not be in goal area while in possession of ball.	with 100% accuracy as judged by the teacher.
Given instruction by the teacher and practice	the student will demonstrate the following skills: 1) catching with one and two hands 2) knowledge of position play 3) proper defensive play 4) quick stops and starts	at a level determined adequate by the teacher

TEAM HANDBALL GRADES 4 - 5 - 6 - 7 - 8

OBJECTIVES - DATE CRITERIA MET

NAME	SKILLS			RULES			SKILLS					
	DRIBBLING	PASSING	SHOOTING	1	2	3	CATCHING	KNOWLEDGE OF POSITION	DEFENSE	STOPS + STARTS		

PHYSICAL EDUCATION MINIMUM OBJECTIVES

ACTIVITY: Gym Hockey

GRADE LEVELS: 3-8 (leadup relays in Grade 2)

With the exception of relays, there are no effective lead-up games for gym hockey. The rudimentary skills of stick handling and shooting have proven relatively easy to learn. Skills are sharpened in game situations. This is the one sport in which the younger grades are able to grasp game strategies as well as those who are older.

Conditions	Behavior	Criteria
Given instruction by the teacher and line relays	the student in grades two and tree will practice the following skills: 1) proper stick hold 2) stick handling 3) moving with the puck 4) shooting, forehand and back hand	at a level that will enable the student, in the teacher's judgment, to begin instruction in game situations
Given instruction by the teacher and practice	the student (gr. 3-8) will demonstrate the following skills in game situations: 1) proper stick hold 2) stick handling 3) shooting, forehand and back hand 4) use of hands, feet and body to blick puck 5) goal tending 6) checking 7) passing 8) position play	at a level determined adequate by the teacher

Given instruction by the teacher and practice in game situations	the student will explain orally the following terms: 1) puck 2) stick 3) net and crease 4) offside 5) checking 6) face-offs 7) penalties	with 100% accuracy as determined by the teacher

GYM HOCKEY GRADES 3 - 4 - 5 - 6 - 7 - 8

OBJECTIVES - DATE CRITERIA NET

NAME	PRACTISE				SKILLS IN GAME SITUATION							
	1	2	3	4	1	2	3	4	5	6	7	8

GYM HOCKEY GRADES 3 - 4 - 5 - 6 - 7 - 8

OBJECTIVES - DATE CRITERIA MET

NAME												
	TERMS											
	1	2	3	4	5	6	7					

PHYSICAL EDUCATION MINIMUM OBJECTIVES

ACTIVITY: Wrestling

GRADE LEVELS: 4-8 boys

In grade four only the basic takedowns are taught, while grades five through eight also participate in matches.

Conditions	Behavior	Criteria
Given instruction by the teacher and practice	the 3rd grade student will demonstrate the following takedowns: 1) single leg 2) double leg 3) arm diag 4) ankle pick-up	at a level determined adequate by the teacher
Given instruction by the teacher and practice	the student in grades 4-8 will demonstrate the following takedowns: 1) single leg 2) double leg 3) arm diag 4) ankle pick-up 5) drag to double leg 6) leg sweep	at a level the teacher determines is adequate for competition
Given instruction by the teacher and practice	the student will demonstrate the following breakdown to pinning combinations: 1) over and under 2) three-quarter Nelson and leg hook 3) far arm and far leg tilt 4) drop back	at a level the teacher determines is adequate for competition
Given instruction by the teacher and practice	the student will demonstrate the following escapes: 1) switch 2) sit out 3) sit out and turn 4) standing switch	at a level the teacher determines is adequate for competition

Given weight divisions and practice in the basic skills	the student will wrestle in competition	at a competitive level determined by the teacher
Given instruction by the teacher	the student will perform loosening and warming up exercises (See enabling objective CROSS COUNTRY)	before participating in skills practice or competition

WRESTLING

GRADES 3-4-5-6-7-8

OBJECTIVES - DATE CRITERIA MET

NAME	TAKEDOWNS						BREAKDOWN TO PINNING					
	1	2	3	4	5	6	1	2	3	4		

WRESTLING GRADES 3 - 4 - 5 - 6 - 7 - 8

OBJECTIVES - DATE CRITERIA MET

NAME	ESCAPES				CONPETITION	EXERCISES						
	1	2	3	4								

PHYSICAL EDUCATION MINIMUM OBJECTIVES

ACTIVITY: Gymnastics

GRADE LEVEL: 3-8

The area of activities in gymnastics is broad and inclusive which implies an opportunity for a child to test himself, to prove himself, to discover his abilities, and to achieve success through his own efforts.

The basic forms of gymnastic activities are:

1. Basic movement skills
2. Developmental exercises
3. stunts
4. Tumbling
5. Activities using small equipment
6. Activities on large apparatus

Developmental experiences in all these activities provide for development of large muscle groups, strength, muscle endurance, agility, balance, flexibility, and coordination.

Grades 3-6

Conditions	Behavior	Criteria
Given instruction by the teacher and practice	the student will demonstrate the following basic movement skills: 1) climbing 2) curling 3) twisting 4) turning 5) rolling 6) extension 7) jumping 8) landing 9) transferring weight 10) supporting weight on various parts of the body 11) quick starts and stops	at a level determined adequate by the teacher

GYMNASTICS GRADES 3 - 4 - 5 - 6 - 7 - 8

OBJECTIVES - DATE CRITERIA MET

NAME	BASIC MOVEMENT SKILLS											
	1	2	3	4	5	6	7	8	9	10	11	

Given instruction by the teacher and practice	the child will be able to demonstrate the following exercises and stunts: 1) single squash 2) knee walk 3) knee dip 4) jump turns 5) rolling logs 6) heel slap 7) measuring worm 8) straddle chins 9) leg lifts 10) sit ups 11) knee scale 12) front scale 13) beginning routines	at a level determined adequate by the teacher
Given instruction by the teacher and practice	the student will demonstrate the following tumbling skills: 1) forward roll 2) backward roll 3) cartwheel 4) round off 5) handstand 6) headstand 7) handspring 8) headspring 9) backbend 10) walkover	at a level determined adequate by the teacher
Given instruction by the teacher and practice	the student will demonstrate the following skills on the horizontal bar: 1) front support 2) forward roll 3) chinning 4) knee circles 5) back pullover to support	at a level determined adequate by the teacher
Given instruction by the teacher and practice	the student will demonstrate the following skills on the parallel bars: 1) inverted hang 2) skin the cat 3) straight arm support 4) straight arm travel 5) straddle travel 6) dismounts	at a level determined adequate by the teacher

Given instruction by the teacher and practice	the student will demonstrate the following skills on the climbing ropes: 1) climb using arms and legs 2) climb using arms only 3) swinging 4) skin the cat 5) forward roll 6) dismounts 7) inverted hang, kip and return	at a level determined adequate by the teacher
Given instruction by the teacher and practice	the girl students will demonstrate the following balance beam skills: 1) one knee mount 2) walk 3) dip walk 4) run 5) straddle seat 6) scale 7) pivot turn 8) pose 9) jump with quarter turn 10) jump with half turn 11) straddle jump 12) cartwheel off beam	at a level determined adequate by the teacher

GYMNASTICS 3 - 4 - 5 - 6 - 7 - 8

OBJECTIVES - DATE CRITERIA MET

NAME	DEVELOPMENTAL EXERCISES											
	1	2	3	4	5	6	7	8	9	10	11	

NAME	OBJECTIVES - DATE CRITERIA MET											
			TUMBLING				SKILLS					
	12	13	1	2	3	4	5	6	7	8	9	10

NAME	OBJECTIVES - DATE CRITERIA MET											
			TUMBLING SKILLS									
	12	13	1	2	3	4	5	6	7	8	9	10

GYMNASTICS 3 - 4 - 5 - 6 - 7 - 8

OBJECTIVES - DATE CRITERIA MET

NAME	ROPE CLIMBING											
	1	2	3	4	5	6	7					

GYMNASTICS - GIRLS 3 - 4 - 5 - 6 - 7 - 8

OBJECTIVES - DATE CRITERIA MET

NAME	BALANCE			BEAM			SKILLS					
	1	2	3	4	5	6	7	8	9	10	11	1

PHYSICAL EDUCATION MINIMUM OBJECTIVES

ACTIVITY: Cross Country

The cross country course is 664 yards long; however, grades three and four begin by running half the distance and gradually work up to the full yardage. Grades five through eight start at the full distance and eventually work up to a full mile. Emphasis is upon bettering one's own time in the event and not upon beating someone else.

Grades 3-6

Conditions	Behavior	Criteria
Given a classroom setting and instruction by the teacher	the student will demonstrate proper loosening and warming up exercises (see enabling objective "A")	before participating in the strenuous cross country run
Grades 3-4		
Given a cross country course 332 yards long	the student will first attempt to run the complete distance	without stopping
Given a cross country course 332 yards long	the student will, after practice, attempt to run the complete distance	in 90 seconds or less without stopping
Given a cross country course 664 yards long	the student will, after completion of the two above objectives, run the longer course	without stopping
Grades 5-6		
Given a cross country course 664 yards long	the student will first attempt to run the full distance	without stopping
Given a cross country course 664 yards long	the student will, after practice, attempt to run the complete distance	in less than 3 minutes without stopping

NAME	GYMNASTICS 3 - 4 - 5 - 6 - 7 - 8 OBJECTIVES - DATE CRITERIA MET											
	HORIZONTAL BAR					PARALLEL BARS						
	1	2	3	4	5	1	2	3	4	5	6	

iven a cross country ourse 1328 yards (2 laps) long	the student will, after successfully completing the above objectives, attempt to run the distance	without stopping
iven a classroom ituation and in- truction by the eacher	the student will perform the following loosening and warming exercises:	before running cross country, participating in track and field, playing soccer, basketball, wrestling, and gymnastics

A. Hamstring stretch - assume sitting position, spread feet, and keeping knees straight, grasp feet and force the head down between the arms as far as possible.

B. Lateral stretch - assume sitting position, fully extend left leg forward and extend right leg at hip. Grasp left foot with both hands while keeping knee straight and try to touch knee with forehead. Repeat and reverse legs.

C. Sit-ups

D. Pushups

E. Leg splits - lying on floor with hands behind head, raise legs with knees straight up over head and then lower to six inches off floor. Spread feet apart about two feet and hold.

CROSS COUNTRY GRADES 3 4

OBJECTIVES - DATE CRITERIA MET

NAME	1	2	3	4								
	EVERSISES	332 YDS.	332 YDS.	664 YDS								

NAME

CROSS COUNTRY GRADES 5 - 6

OBJECTIVES - DATE CRITERIA MET

	EXERCISES	664 YDS	664 YDS 3 MIN.	1328 YDS	WARMING UP EXERCISES							
	1	2	3	4	A	B	C	D	E			

PHYSICAL EDUCATION MINIMUM OBJECTIVES

ACTIVITY: Soccer

Grades 3-6

Grades three and four learn skills and play lead-up games both indoors and out, but actual game situations are restricted primarily to the gym where the smaller space makes the learning of positions, strategies, and rules much easier.

Grades 3-4

Conditions	Behavior	Criteria
Given a soccer ball, instruction by the teacher and the following lead-up games: 1) circle soccer 2) dribbling relays 3) dribble maze relays	the student will turn the kicking foot outward, bend the knee, and, while both stationary and running, kick the ball	with the inside of the foot
Given a soccer ball, instruction by the teacher and the following lead-up games: 1) line dribbling 2) shuttle dribbling 3) dribbling relays	the student will, while running, tap the ball with the inside edge of alternate feet	with speed and control that will enable him/her to successfully employ the skill in a game situation
Given a soccer ball, instruction by the teacher, and the following lead-up games: 1) circle soccer 2) soccer dodgeball 3) keep away	the student will trap the ball	using both the single and double leg trap

Given instruction by the teacher	the student will: 1) use short, quick, controlled kicks 2) have ball under control before kicking 3) stay in own position area 4) not attempt to take ball away from a teammate 5) center the ball on offense and clear to the side on defense	during a game experience

Grades 5-6

After completing the minimum objectives in grades three and four the fifth and sixth grades are ready to participate in regulation soccer games on an official field. Emphasis is upon skills acquisition through both lead-up games and game situations.

Given a soccer field and instruction by the teacher	the student will be able to name orally the regulation dimensions of the field and the names and positions of all players	with 100% accuracy when asked by the teacher
Given a soccer field and instruction from the teacher	the student will be able to define the following terms: 1) corner kick 2) free kick 3) direct and indirect kicks 4) heading 5) kick opp 6) penalty kick 7) trapping 8) throw ins	when asked by the instructor
Given instruction and practice through lead-up games and relays	the student will demonstrate the following skills 1) kicking 2) trapping 3) throw-ins 4) corner kicks 5) kick offs 6) heading 7) passing	under game conditions

Given instruction by the teacher	the student will demonstrate knowledge of positional play for the following on both offense and defense: 1) corner kicks 2) penalty kicks 3) throw-ins 4) kick-offs	under game conditions
Given instructions by the teacher	the student will demonstrate proper loosening and warming up exercises (See enabling objective "A" under CROSS COUNTRY for description)	before participating in skills or games

SOCCER 3 - 4
OBJECTIVES - DATE CRITERIA MET

NAME	1	2	3	4								

NAME	SOCCER 5 - [illegible]					Objectives - Date Criteria Met								
	1	2	3	4	[illegible]				TEAMS					
						1	2	3	4	5	6	7	8	

SOCCER 5 - 6

OBJECTIVES - DATE CRITERIA MET

NAME	SKILLS							POSITIONAL PLAY				EXERCISES
	1	2	3	4	5	6	7	1	2	3	4	

Given instruction by the teacher	the student will punt the ball	holding the ball in both hands and kicking with the toe just after the knee locks in position and then following through
Given instruction by the teacher	the student will explain the following terms orally: 1) line of scrimmage 2) touchdown 3) kick-off 4) offside 5) offensive holding 6) huddle 7) fumble 8) down 9) block 10) interception 11) safety 12) field goal 13) touchback	with 100% accuracy as judged by the teacher
Given instruction by the teacher	the student will demonstrate proper loosening and warming up exercises	before participating in skills or games

NAME	FLAG FOOTBALL 5 - 6 OBJECTIVES - DATE CRITERIA MET											
	CATCH	THROW	RUN	LINE BLOCK	PUNT	EXPLAIN TERMS ORALLY						
						1	2	3	4	5	6	

FLAG FOOTBALL 5 -- 6

OBJECTIVES - DATE CRITERIA MET

NAME	EXPLAIN TERMS ORALLY							EXERCISES				
	7	8	9	10	11	12	13					

MUSIC MINIMUM OBJECTIVES

Audrey Moore

PRE-TEST and/or POST-TEST FOR KINDERGARTEN MUSIC

Name________________________________ Date________________________

Teacher asks questions verbally and student answers verbally or physically.

1. Show me with your arms where "high" is.
   Show me with your arms where "low" is.

2. Clap your hands "loudly".
   Clap you hands "softly".

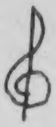
3. Show me a "long" step with your legs.
   Show me a "short" step with your legs.

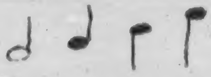
4. Make your mouth into a circle and sing a sliding "000000" as "high" as your voice will go (not loud but rather, high)

5. Make your mouth into a slit (smile) and sing a sliding "zzzzzzzzzz" as low as your voice will go (not soft but low)

6. Here are some of our rythm instruments. Tell me the name of as many as you can. (sticks, bells, drums, rattles, sandblocks, maracas, tambourines)

7. Here is a music house. Tell me its name. (staff)

8. Who lives there? (Alternative: What goes on a staff?) (Mrs.) (G Clef) 

9. Who else lives there? (Alternative: What else goes on a staff? (Notes) 

10. With your voice sing 8 tones in a row going up.
    With your voice sing 8 tones in a row going down.

MUSIC SKILLS MINIMUM OBJECTIVES - Kindergarten

I. Singing

1. Given five sets of two tones of clearly different pitches	the student will identify the higher and/or the lower pitch	with 100% accuracy in all five sets. K.0
2. Given five sets of two tones of clearly different intensities	the student will identify the louder and/or the softer tone	with 100% accuracy in all five sets. K.1
3. Given five sets of two tones of clearly different lengths	the student will identify the longer and/or shorter tone	with 100% accuracy in all five sets. K.2
4. Given a series of two pitches sung to him ("Hel-lo")	the student will sing the same pitches back	as judged close enough by the teacher. K.3
5. Given a series of three pitches sung to him ("Good morn-ing")	the student will sing the same pitches back	as judged close enough by the teacher. K.4
6. Given a series of four pitches sung to him ("What is your name?")	the student will sing the answer ("My name is ____") back on the same pitches	as judged close enough by the teacher. K.5
7. Given one line at a time, an eight line melody with words	the student will sing each line back	as judged close enoug by the teacher K.6
8. Given eight appropriate K. songs taught by the rote method (see MO #7)	the student will sing through many types of rising and falling melodies	as judged close enough by the teacher K.7
9. Given ten appropriate K. seasonal and classroom songs taught by the rote method	the student will demonstrate tonal memory training by singing the songs with classmates	as judged close enough by the teacher K.8
10. Given 12 appropriate K. seasonal and classroom songs taught by the rote method	the student will demonstrate tonal memory traing by singing the songs alone, if asked, or with classmates.	as judged close enough by the teacher K.9

MUSIC SKILLS MINIMUM OBJECTIVES - Kindergarten

II. Moving

1. Given the song, "Eency Weency Spider" which is an 8-line melody with words and finger, hand and arm motions	the student will make the motions which depict the song words	100% appropriately as judged by the teacher. K.1
2. Given the song, "Fuzzy Caterpillar" which is taught by the rote method	the student will sing the words and melody	as judged close enough by the teacher K.2
	and create his own big motions to depict "caterpillar"	with 100% participation and individual interpretation.
3. Given the song, "Red Leaves, Yellow Leaves" (Class may divide into two groups (red leaf, yellow leaf)	the student will sing the song and move in large motions to interpret the song	with 100% participation. K.3
4. Given one or more appropriate seasonal songs	the student will sing and/or move to demonstrate the meaning of the words	with 100% participation. K.4
5. Given the song, "Sliding on the Ice" (3 verses)	the student will sing the song	with 100% participation
Given the whole body motions by the teacher (one line at a time)	the student will move through the story in a similar manner	with 100% participation. K.5
6. Given a 40 minute time segment in the auditorium	the student will participate in a school concert for peers and parents	with 100% participation. K.6
7. Given the song, "Sitting in a Circle" (unlimited)	the student will create a motion for the rest of the children to do	with 100% participation. K.7
8. Given the song, "People on the Bus" (6 verses) and suggested motions by the teacher	the student will sing and move through motions	which are appropriate to the words as judged by the teacher. K.8

9. Given appropriate classroom and seasonal songs throughout the year the student will sing and move to the music appropriately according to the judgment of the teacher and with 100% participation. K.9

"If You're Happy"
"Lassie"

MUSIC SKILL MINIMUN OBJECTIVES - Kindergarten

II. Listening

1. Given a 15 minute presentation of "Music for Young Listeners"	the student will hear	voices singing appropriate songs.
2. Given a 15 minute presentation of "Childhood Music"	the student will hear	beats and rhythmes in simple form.
3. Given a 20 minute presentation of "Music Around the Clock"	the student will hear	words and rhythmes about daily living.
4. Given a 20 minute presentation of "Christmas Stories for Children" (6 possible Sound Books)	the student will hear	words and music about the season.
5. Given a two-part (two-lesson) presentation of Saint Saens', "Carnival of the Animals" (This lesson is also preliminary to a Playing/Interpretation lesson, see IV Playing)	the student will hear	symphonic music describing various animals.
6. Given a 15 minute (two-lesson) presentation of appropriate patriotic music	the student will hear	words and melodies which are part of American culture.
7. Given a 15 minute presentation of "Weather Songs"	the student will hear	melodies, rhythmes, and words describing weather phenomena (very elementary).
8. Given a 15 minute presentation of "Experiment Songs"	the student will hear	melodies and words telling about scientific facts (very elementary).
9. Given a presentation of supplementary early childhood music	the student will hear	appropriate music
10. Given a presentation of songs recorded from "Growing With Music" (2-4 lessons)	the student will hear	an introduction to first grade music.

MUSIC SKILLS MINIMUM OBJECTIVES - Kindergarten

III. Playing

1. Given a pair of wooden rhythm sticks (Clave's), piano accompaniment of the teacher	the student will hit them together	with 100% participation. K.1
2. Given a tambourine and a beat set by a recording or piano	the student will tap and/or shake it	with 100% participation. K.2
3. Given a triangle, an accompaniment and a prompt by the teacher	the student will strike the triangle	at appropriate times as judged by the teacher. K.3
4. Given a pair of maracas and a melody accompaniment	the student will shake either one or both of them	to the beat or rhythm of the melody. K.4
5. Given a set of sand blocks and a tune	the student will slide them together back and forth	in time with the tune. K.5
6. Given a bracelet of jingle bells and a tune	the student will shake them	to the rhythm of the tune. K.6
7. Given one of several types of shakers (hand rattles, clackers, etc.) and music	the student will shake them	to the beat or rhythm of the song. K-7
8. Given crayons (one color at a time) and music, "Carnival of Animals" (the teacher will also supply colored paper shapes)	the student will draw a picture	to interpret his own reaction to each of the sections of the music. K.8
9. Given crayons and a paper staff with "Happy Notes"	the student will color	the heads of the notes. K.9
10. Given a chalk, music and a prompt to go to the blackboard	the student will draw and/or color	his interpretation of the music K.10

Perception

9. Given flannel pictures of music symbols (clefs, notes, accidentals, etc.), introduced one at a time	the child will match the word spoken by the teacher with the corresponding picture	with 90-100% accuracy on 3 consecutive days. 1.5
10. Given appropriate Patriotic Songs (one-two verses) from American Heritage	the student will sing the music	with 100% accuracy as judged by the teacher 1.6
11. Given appropriate classroom and seasonal music throughout the year	the student's pitch, range and tone	will improve as judged by the teacher 1.7
12. Given singing activities throughout the school year	the student will sing words and melodies the subjects of which are related to his daily activities--ex., getting up, going to school, etc.	with 90-100% accuracy as judged by the teacher 1.9

PRE-TEST and/or POST-TEST FOR GRADE 1 MUSIC

Name________________________________Date______________

Teacher asks questions verbally and student responds verbally or physically.

1. Tell me which tone I play for you is the louder one.
   Tell me which tone I play for you is the softer one.

2. I will play a row of tones for you. Tell me how many you hear (count them).

3. Tell me which tone I play for you is the higher one.
   Tell me which tone I play for you is the lower one.

4. I will sing a row of tones to you. Sing them back to me.

5. Go to the blackboard and draw a music staff.

6. Draw Mrs. G Clef on the staff.

7. Draw 8 music notes under the staff.

8. Draw any other music symbols that you can think of.

9. Can you tell me the names of these rythm instruments?

10. Pick out three of these rythm instruments and show me how they are played.

MUSIC SKILLS MINIMUM OBJECTIVES - Grade One

I. Review, Pretest - Singing

Tonal Discrimination

1. Given 2 tones, one louder than the other	the child will choose verbally which sound is louder and which sound is softer	with 100% accuracy. during 3 consecutive lessons 1.1
2. Given the song (and many other similar ones) "Hello Everybody" presented one tonal line at a time - refer to Moving, Grade 1	the student will sing each line back to teacher	with 100% accuracy. 1.1
3. Given 2 tones, one higher pitched than the other	the child will verbally choose which sound is higher pitched and which sound is lower pitched	with 100% accuracy. during 3 consecutive lessons 1.2
4. Given the song "Five Little Pumpkins" (and many other appropriate classroom and seasonal songs) presented one tonal line at a time - refer to Moving - Grade 1	the student will sing each line back to the teacher	with 100% accuracy. 1.2
5. Given a number of unrelated sounds such as tapping vs. clapping	the child will verbally identify the two sounds and note the difference	with 100% accuracy during 3 consecutive lessons 1.3
6. Given the song "Five Fat Turkeys" - refer to Moving - Grade 1 (2 verses)	the student will sing each line of words and melody back to the teacher	100% accuracy. 1.3

Sequencing and Memory

7. Given tonal patterns (with up to six parts)	the child will imitate the pattern	with 100% accuracy on 3 consecutive lessons 1.
8. Given the seasonal Christmas songs	the student will sing and memorize the words and melodies	to peers and parents in a concert 1.4

MUSIC SKILLS MINIMUM OBJECTIVES - Grade One

II. Moving

1. Given a chair	the student will sit with feet on floor upon arrival in room	100% of time unless chairs are not set up (teacher decides). 1.1
2. Given the song "Hello Everybody" and instructions from the teacher	the student will clap the "Yes Indeed" rhythm	every time it occurs in a song 1.1
3. Given a classroom space (free of chairs and furniture as possible)	the student will create motions and movements to demonstrate that he is wind, water, sun, moon, stars, trees, hot, cold, etc.	with 100% participation. 1.2
4. Given the song "Five Little Pumpkins" and four other children in the group	the student will demonstrate his interpretation of each "role" in the song (dramatization)	with 100% involvement 1.2
5. Given the song "Five Fat Turkeys" and a prompt from the teacher	the student will dramatize the two-verse story-song	with 100% involvement 6 children at a time 1.3
6. Given a large ball (10"-12" diam.) and musical accompaniment	the student will walk and sweep the ball through the air at different levels (high-low)	with 90-100% accuracy in several lessons 1.5
7. Given music that suggests march, hop, jump, skip, sway, bend, etc.	the student will do the appropriate activity to match the music	100% of the time. 1.6
8. Given the song "Blue-Bird, Blue-Bird" with folk-dance inst.	the student will sing and do the learned movements	with 100% involvement 1.7
9. Given the folk-dance "Patch Tanz" with accompaniment	the students will demonstrate the movements	with 100% participation 1.8
10. Given 30 minute assembly time in gym.	students will perform	spring concert. 1.9

MUSIC SKILLS MINIMUM OBJECTIVES - Grade One

III. Playing

1. Given a pair of rhythm sticks and a melodic accompaniment (which may be piano or any other accompanying inst.)	the student will hit the sticks together	in either the rhythm or beat of the music 1.2
2. Given a tambourine and a melodic accompaniment	the student will tap and/or shake the tambourine	in either the rhythm or beat of the music 1.2
3. Given a triangle, a melodic accompaniment and instructions from the teacher	the student will strike the triangle	at appropriate times as instructed by the teacher 1.3
4. Given a set of wrist bells (or bells fastened on hand sticks) and a melodic accompaniment	the student will shake the bells	in either the rhythm or beat of the music 1.3
5. Given a pair of maracas and an appropriate accompaniment (usually Spanish or Latin American)	the student will shake one or both of them	in either the rhythm or beat of the music 1.3
6. Given a special part to play in a selected song	the student will play his assigned rhythm instrument with his classmates	at appropriate times as judged by the teacher 1.4
7. Given a discussion of the "Boom" sound and songs which may be accompanied by this sound-See also Moving	the student will sing and play drumming accompaniments	with success as judged by the teacher 1.6
8. Given disucssions of 'Boom', 'Click' and 'Jingle' sounds	the student will sort his instruments into the three categories	with 100% accuracy 1.7

9. Given a tone-bell and a wooden mallet selected by the teacher	the student will strike the bell	and produce the tone with 100% accuracy 1.8
10. Given a song which may be accompanied by a tone bell on the first beat of every measure, and instructions by the teacher (often help from peers' counting) and/or singing	the student will play the tone bell during the song	using it at the appropriate times as judged by the teacher 1.9

PRE-TEST and/or POST-TEST FOR GRADE 2 MUSIC

Name______________________________ Date________________

I. Verbal Section: teacher asks, child responds

1. Sing a row of tines going up. Sing medium loudly.
   Sing a row of tones going down. Sing softly.
2. Sing a row of 8 tones going up - using numbers.
   Sing a row of 8 tones going up - using letters, beginning on "C".
   Sing a row of 8 tones going up - using syllables.
3. Sing all or part of any song that you know, whether or not you learned it in school classes.

II. Manual Section: on blackboard or ditto

1. Draw a staff in the space.
2. Put "Mrs. G Clef" at the beginning of the staff.
3. Put "happy notes" in the spaces.
4. Put "happy notes" on the lines.
5. Draw "middle C".
6. Draw a new staff in the space.
7. Put the letters in the spaces.
8. Put the letters on the lines.

III. Rythmic Section: teacher prompts, child responds

12. Here is a melody for you to hear. Make a body sound or motion to go with it. ("Comin' Round the Mountain")
13. Here are the rythm instruments. You may pick any one you like. (drum will not be included) Make up a rythmn on your instrument and show it to us. (Song - "Fine Musicians")
14. Here is a drum. I will play a melody for you to hear. Play the drum the best way you can to follow the music. (Song - "There are Many Flags")

MUSIC SKILLS MINIMUM OBJECTIVES - Grade Two

I. Singing

1. Given a number of songs from the Grade one lessons, accompaniment and a prompt by the teacher	the student will sing for fun and review previous skills learned in Grade one	with 90-95% participation 2.1

The review "Sing for Fun" lessons will continue until the teacher feels that all the children (even new students) are participating.

2. Given the song "Good Morning Merry Sunshine" (2 verses)-See also Moving.	the student will sing each line of words and melody	successfully, as judged by teacher 2.2
3. Given the song "Joy is like the Rain" (3 verses)	the student will sing each line of words and melody	successfully, as judged by teacher 2.3
4. (a) Given presentation in which the teacher will read the names of the music symbols to the children and also describe what each one means	the student will discuss the meanings in an oral group dialogue	with the teacher 2.3
(b) Given ditto papers with symbols of music written with titles to match	the student will verbally identify	all of the symbols 2.3
5. Given appropriate classroom and seasonal songs--presented in review or introduced for the first time and accompanied by the teacher	the student will sing and memorize a number of the songs to perform in a small concert for parents and peers	with 95% successful participation as judged by teacher 2.4
6. Given ditto papers with music symbols and their identifying names	the student will draw lines to match the picture with the word	with 90-100% accuracy in three lessons 2.5
7. Given a blackboard with a staff drawn on it by the teacher and a prompt from the teacher	the student will place (draw) music symbols on the staff	accurately 2.6

8. Given a copy of the Prentice-Hall Grade 2 Basal Music Series Book	the student will look at words and music symbols which are constructed into songs	quietly in his seat for half the music period as judged by the teacher 2.7
9. Given appropriately chosen classroom and seasonal songs from the Grade 2 Music Book and Instruction from the teacher	the student will read words and relate them to the note positions up and down the staff	during 50% of each class time 2.8
10. Given appropriate music from Class Music Book and supplementary music from other sources	the student will have many types of singing experiences	throughout the school year as arranged by teacher within the time limitations of the schedule 2.9
11. Given a 30-40 minute assembly attended by parents, teachers and peers	the student will sing, play and move through music	successfully as judged by the teacher 3.0

MUSIC SKILLS MINIMUM OBJECTIVES - Grade Two

II. Moving

1. Given his own body as an object in space and a "musical mood" (different rhythms and tempos played on piano by teacher)	the student will move to music	according to his own interpretation 2.1
2. Given the song "sing High, Sing Low"	the student will move his body to illustrate the words of the song as he sings them	according to his interpretation of "high" and "low" 2.2
3. Given a number of appropriate classroom songs	the student will use his body to illustrate	his dramatization of the words and/or music 2.3

The music is selected by the teacher, the interpretation is spontaneous by the children.

4. Given appropriate classroom and seasonal songs and a 40 minute assembly	the student will demonstrate music skills by singing, moving, or playing in a small concert	successfully, as judged by teacher, peers, parents 2.4
5. Given the song "Skating on the Ice" (3 verses)	the student will move through the words, music and motions	for fun in a review song and involvement with peers 2.5
6. Given the song, "Walking in the Sunshine"	the student will walk in a circle with peers moving his body in rhythms to illustrate	his dramatization of the song 2.6
7. Given the song, "Susan Brown" and instructions on folk dance movements from teacher (4 verses)	the student will sing the words and melody and move through the motions	successfully and 100% accurately 2.7
8. Given appropriate classroom music with words that may be dramatized (story-songs such as "Sleeping Beauty", etc.)	the student will create motions	to illustrate his interpretation 2.8

9. Given a 40 minute assembly	the student will demonstrate musical skills in singing, moving or playing	successfully with peers, teachers, and parents 3.0

MUSIC SKILLS MINIMUM OBJECTIVES - Grade Two

II. Playing

1. Given his own body as a percussion instrument	the student will create different sounds by:	
	clapping hands	accurately
	clapping cupped hands	accurately
	striking knees	accurately
	slapping thighs	accurately
	tapping toes	accurately
	swishing hands	accurately 2.1
2. Given rhythm sticks and a melodic accompaniment	the student will improvise rhythms	of his own 2.2
3. Given a tambourine and a melodic accompaniment	the student will tap or shake beat or rhythm	of his own choice 2.2
4. Given a triangle and a melodic accompaniment with specific instructions	the student will strike the instrument	at appropriate times during the song (as judged by the teacher) 2.3
5. Given a Seasonal Song and his choice of instrument from rhythm band	the student will play in small concert	at all appropriate times 2.4
6. Given a pair of maracas and the song "San Sererino"	the student will shake them or one of them in a rhythm or beat	to accompany the song 2.5
7. Given a tone bell, a mallet and a melodic accompaniment	the student will strike the bell on the beat of the song (for 3 trials)	with 100% accuracy by the third trial 2.6
8. Given two tone bells, a mallet and a melodic accompaniment	the student will strike the bells in a rhythmic ostinato (for 3 trials)	with 100% accuracy by third trial 2.7
9. Given a tuned orrf tympani and a drum stick and a 3/4 melodic acc.	the student will strike the drum on the first beat of the 3/4 measure (for 3 trials)	with 100% accuracy by third trial 2.8

10. Given two tuned tympani and a mallet and a 4/4 melodic acc.	the student will strike the drum on the first and third beats of the 4/4 measure (for 3 trials)	with 100% accuracy by third trial 3.0

PRE-TEST FOR GRADE 3 MUSIC

I. Verbal Section: teacher asks, child responds

1. "Here is a beginning tone." (Middle C)
   "Sing a scale of 8 tones going up" - use numbers.
   "Sing the scale coming down" - use the numbers backwards.

(The child should sing with a major mode tonality)

2. "Here is a beginning tone." (A above Mid C)
   "Sing a scale of 8 tones going up" - use numbers.

Play with the student = 1 2 3 4 5 6 7 #8

(The child should sing with a minor mode tonality)

3. Repeat both #1 and #2 using syllables.

II. Manual Section: on blackboard or ditto

1. Draw a G clef on the staff.
2. Draw 'Middle C' below the staff.
3. Draw whole notes on every line and space up to the next 'C'.
4. Begin on the new staff. Draw G clef.
5. Draw a half note in the second space.
6. Draw half notes on every line and space from that second space to the first added line above the staff. (never mind the stem direction)

III. Rhythmic Section: teacher prompts, child responds

1. "I will clap a beat" (1 - 2 etc./1 - 2 - 3 etc.)
   "I want you to clap something different against it." - anything the child devises will be acceptable.
2. "Here are our rhythm instruments."
   "I want you to separate them into high and low sounds."
   (let child move the instruments into groups)
3. You may pick any instrument you like except the drum.
   Make up a rhythm on your instrument and show it to us.

   (Teacher may, or may not prompt with a accompaniment on the piano or another instrument.)

PRE-TEST FOR GRADE 3 MUSIC, cont.

4. Choose a drum this time.
I will play a melody for you to hear.
Play the drum on the beat of the music.

(Song - "Marching to Praetoria")

MUSIC SKILLS MINIMUM OBJECTIVES - Grade 3

I. Singing

1.	Given a number of songs from Grade two lessons, accompaniment and a prompt by the teacher	the student will sing for fun and review of the previous skills learned in Grade 2	until the teacher feels that all children (even new students) are participating 3.1
2.	Given the song, "I Want to be Ready" (4 verses) from the basal music series - book 3	the student will read the words and the music and sing	with the class 3.1
3.	Given the song "Grasshopper and Ants" (4 verses) (See Moving)	the student will read and sing the words and notes which tell the story/song	3.2
4.	Given the song "The Bells" from zone II, p. 23 (see also Playing and Moving)	the student will sing the words and melody of the song	with 100% participation with classmates 3.3
5.	Given the key of "The Bells" and the tonic or home tone	the student will sing the tonic tone	100% successfully 3.3
6.	Given the syllables of the scale (do,re,mi, fa,sol, la, ti, do)	the student will sing the scale based on the tonic	100% accurately 3.4
7.	Given appropriate classroom and seasonal songs	the student will sing tonic (home) tones, scales (with syllables) and words and melodies that tell song-stories	successfully as judged by the teacher 3.4 3.5 3.6
8.	Given the song "White Choral Bells" (two-part round) (see also Playing and Moving)	the student will sing the song in unison	100% accurately with the rest of the class 3.7
9.	Given the song "White Choral Bells" and an assignment to a part	the student will sing	his part in canonic harmony successfully with the whole class participating 3.7

10.	Given appropriate classroom and seasonal music with introductions and instructions from the teacher (chosen from basal series and supplementary books and sources)	the student will sing tonic roots, major scales, words and melodies	100% accurately 3.9

MUSIC SKILLS MINIMUM OBJECTIVES - Grade 3

II. Moving

1.	Given a "personal space" which may or may not include his chair and a "musical mood" (different rythmic and tempo backgrounds)	the student will move his whole body to interpret the musical sounds	any way he feels 3.1
2.	Given a "person space" and a specific thing to interpret (tree, clouds, wind, grass-hopper, ants, etc.)	the student will move his whole body	to develop his interpretation to his and the teacher's satisfaction 3.2
3.	Given a number of songs which are appropriate for Grade 3 classroom and presentations(intro-duction) which includes hand positions to show the "flow" of the song	the student will use the hand positions to trace the contour of the song	in a visible manner which will be judged correct by the teacher 3.3
4.	Given the song "The Bells", Zone II, p. 23	the student will move his whole body	to the music 3.4
5.	Given the song "Hokey Pokey" (GWM #3, p. 23) instructions and accompaniment	the student will move through the music with motions for each verse	that are appropriate 3.5
6.	Given the song "The Dancing Lesson" (GWM, p. 30) and instructions and accompaniment	the student will (depending on sex) sing and move through the part assigned to him/her	100% accurately 3.6
7.	Given the song "Danish Greeting Dance" (Folk-Dance Book/and/or p. 16 in GWM #3) instructions and accom-paniment from the teacher	the student will move through the motions of the folk dance, a section at a time,	100% accurately as judged by the teacher 3.7 3.8
8.	Given the song "Hop Up My Ladies" GWM #3, p. 26 or Zone II, p. 39) instructions and accompaniment	the student will move through the the American Folk-Dance, a section at a time,	100% accurately 3.9 4.0

MUSIC SKILLS MINIMUM OBJECTIVES - Grade 3

III. Playing

1.	Given the song "The Bells" and a number of other appropriate classroom songs	the student will clap the beat (pulse) while singing the song	as judged correct by the teacher 3.1
2.	Given the song "The Bells" and a number of other appropriate classroom songs	the student will improvise a rythm instrument accompaniment	of his own design 3.2
3.	Given three tone bells which form the tonic chord of the key of a given song and instructions from the teacher	the student will build a chordal accompaniment to the song	with 100% accuracy within three trials 3.3
4.	Given two rythmic patterns to clap (class divided)	the student will learn one or the other	100% accurately 3.4
5.	Given high rythm instruments for one part and/or low rythm instruments for the other part	the student will play his rythmic accompaniment	100% accurately with rest of class 3.4
6.	Given the song "We Are Fine Musicians" (GWM #3, p. 82) and instructions and accompaniment	the student will read, sing and clap from the book score	100% accurately as judged by the teacher 3.5
7.	Given the song "We Are Fine Musicians" and his choice of rhythm sticks, tambourine, triangle	the student will play his instrument at	appropriate places in the song 3.5
8.	Given a recording "Allegro non troppo" (Adventures in Music Grade 2, Vol. 2) and instructions	the student will play a rhythm instrument of his own choice in time with the music 3/4 time heavy on 1 light on 2 & 3 1 2 3, 1 2 3, 1 2 3	3.4

9.	Given tone bells for tonic and dominant chords in the key of a given song, with instructions and accompaniment	the student will play with a wooden mallet on the tone bells and change chords to accompany the song	100% accurately (eventually) 3.8
10.	Given an autoharp and instructions (1971-72 ILU Unit: A. Moore)	the student will practise playing (strumming with a pick) and changing chords	100% successfully 3.9-4.0

CLASS ____________

SINGING MOVING PLAYING

	SEPT - OCT		NOV - DEC		JAN - FEB		MAR - APRIL		MAY - JUNE	
NAMES	1	2	3	4	5	6	7	8	9	10

LIBRARY MINIMUM OBJECTIVES

June Giroux

LIBRARY SKILLS MINIMUM OBJECTIVES

Condition	Behavior	Criteria
Level K-1-2-3		
1. Given a tour of the library and instruction by the librarian	the student will enter the library quietly without interrupting other students and be introduced to the location of books in the library	during each library visit as judged by the librarian
2. Given a demonstration by the librarian with a book	the student will imitate the proper handling and care of a book	with 100% accuracy
3. Given a reading of a book by the librarian	the student will discuss the story and include in the discussion the main idea of the story and recognize the title, author and illustrator of the book	100% of the time
4. Given a free choice of library books	the student will select 2 books with the help of the librarian on his reading or comprehension level	following each story hour
5. Given the two books of his own selection	the student will distinguish between the pocket, pocket card and date due slip and the use of these in charging out a book	with 100% accuracy
Level Three		
6. Given the title, author and subject of a book of his choice	the student will find, with the help of the librarian, the card in the card catalog needed to locate a book of his choice on the shelves and locate that book	with 100% accuracy

Condition	Behavior	Criteria
Level Four and Five		
7. Given a book and prior instruction by the librarian	the student will exhibit the spine, title page, copyright date, table of contents, text, glossary and index of the book to the class or on the worksheet Parts Of A Book (See Appendix A)	with 100% accuracy
8. Given prior instruction by the librarian and 10 flash cards or worksheet Parts Of A Book with sample author names written with first then last names	the student will rewrite the cards or fill out the sheet with the last name first and arrange the author's names in alphabetical order	within 10 minutes with 100% accuracy
9. Given sample catalog cards and prior instruction by the librarian	the student will distinguish verbally between author, title and subject cards to the librarian	within 15 minutes with 100% accuracy
10. Given prior instruction by the librarian and the title, author and subject of fiction books on 3 x 5 cards	the student will locate the card for that book in the card catalog and will locate that book on the shelf	within 15 minutes with 100% accuracy
11. Given prior instruction by the librarian and the title, author and subject of biography books on 3 x 5 cards	the student will locate the card for that book in the card catalog and will locate that book on the shelf	within 15 minutes with 100% accuracy
12. Given prior instruction by the librarian and the title, author and subject of nonfiction books on 3 x 5 cards	the student will locate the card for that book in the card catalog and will locate that book on the shelf	within 15 minutes with 100% accuracy

Condition	Behavior	Criteria
Level Five		
13. Given prior instruction by the librarian and a list of reference books on 3 x 5 cards	the student will locate the card for that book in the card catalog and will locate that book on the shelf	within 15 minutes with 100% accuracy
14. Given a Research Materials Questionnaire (See Appendix B)	the student will answer three questions from each of the following categories: 1. Encyclopedia 2. Vermont Yearbook 3. Almanac	within 30 minutes with 100% accuracy
Level 6-7-8		
15. Given a demonstration by the librarian	the student will recognize a variety of reference books and the difference between sets of materials by various publishers	as judged by the librarian in verbal discussion
16. Given a demonstration by the librarian	the student will find color coded cards in the card catalog for a variety of AV materials	as judged by the librarian in verbal discussion
17. Given sample copies of the Reader's Guide and instruction by the librarian	the student will name the following information on a magazine topic: 1. Author 2. Title 3. Periodical Title 4. Volume 5. Page 6. Date of Publication and follow proper procedure for signing out periodicals	as judged by the librarian in verbal discussion
18. Given instruction by the librarian	the student will name various materials available in the Vertical File	as judged by the librarian in verbal discussion

Condition	Behavior	Criteria
19. Given a list of topics by science, language, arts and social studies teachers	the student will choose a topic from one of the lists to do a Research Paper complete	as judged by the librarian in verbal discussion
20. Given a demonstration by the librarian and copies of the Bibliography Form Sheet (See Appendix D)	the student will practice writing bibliographies of various written and AV materials	as judged by the librarian in a classroom activity time
21. Given prior instruction by the home room teacher and discussion with the librarian using a variety of reference and AV materials	the student will practice note taking from various sources	as judged by the librarian and teacher in verbal discussion and written samples
22. Given prior instruction by the home room teacher and discussion with the librarian	the student will review samples of outlines and will write a sample outline	as judged by the librarian and teacher in verbal discussion and written samples
23. Given a manila folder including The Bibliography Form, General Procedures For Preparing a Research Paper (See Appendix E) and Sources for The Research Paper (See Appendix F)	the student will write on 3 x 5 cards a bibliography and key words or draw illustrations, charts and maps from reference and AV materials for a specified number of sources as per grade level	within 10 days with 100% accuracy
24. Given the sheet Writing Your Research Paper (See Appendix G)	the student will organize material from the 3 x 5 cards according to chronological order (time of events), by process order (beginning of idea to conclusion) or course of effect order (problem and solution)	within 1 class period with 100% accuracy
25. Given the student organized 3 x 5 cards	the student will arrange the information and ideas in a sequential outline and prepare a rough draft of that outline	within 2 class periods with 100% accuracy

	Condition	Behavior	Criteria
26.	Given the student organized 3 x 5 cards and rough draft of the outline	following the outline the student will write a rough draft of the report (to vary in length from 100 to 500 words as determined by grade level)	within 2 class periods with 100% accuracy
27.	Given the student organized 3 x 5 cards	the student will arrange the bibliographical data in alphabetical order and write a rough draft of a bibliography	within 1 class period with 100% accuracy
28.	Given the student prepared rough drafts of the outline, text, bibliography and using the sheet Writing Your Research Paper	the student will prepare a final draft of the Research Paper including outline, text of report, illustrations, charts, maps and bibliography	within 2 class periods with 100% accuracy
29.	Given the sheet Writing Your Research Paper	the student will prepare a title page including title of report, student's name and grade	within 15 minutes with 100% accuracy
30.	Given the student prepared materials and sheet Writing Your Research Paper	the student will arrange and staple his report in proper order and present the final report along with rough drafts, 3 x 5 cards, bibliographical form, instruction sheets and source list in a manila folder to the librarian	within 1 class period with 100% accuracy

Appendix A

PARTS OF A BOOK

____
Student's Name

LOOK AT THE TITLE PAGE IN YOUR BOOK FOR THE FOLLOWING INFORMATION:

TITLE____

AUTHOR____

ILLUSTRATOR (Pictures)____________________________

PUBLISHER______________________________________

PLACE OF PUBLICATION______________________________

COPYRIGHT DATE____________DOES IT HAVE A TABLE OF CONTENTS?____

DOES IT HAVE A GLOSSARY?________________________________

DOES IT HAVE AN INDEX?_________________________________

WRITE YOUR FIRST, MIDDLE AND LAST NAME:

________________ ________________ ________________
FIRST MIDDLE LAST

WRITE THESE AUTHORS" NAMES WITH THE LAST NAME FIRST. DON"T FORGET THE COMA. CIRCLE THE AUTHOR LETTERS AND ARRANGE IN ALPHABETICAL ORDER BY NUMBERS.

MARION RENICK______________________________________

ROBERT LAWSON______________________________________

LAURA INGALLS WILDER_________________________________

WALTER BROOKS______________________________________

C. W. ANDERSON_____________________________________

HELEN FULLER ORTON__________________________________

W. BEN HUNT_______________________________________

MAUDE H. LOVELACE___________________________________

Name ______________________________

Appendix B

RESEARCH MATERIALS QUESTIONNAIRE

Use the index to find the key words in your question

ENCYCLOPEDIAS:

1. When did Alaska become a state?

   Answer ______________________________

   Name of Ency. ______________________________

   Volume ______________ Page ______________

2. For what did Niels Bohr, the Danish physicist, win the Nobel Prize?

   Answer ______________________________

   Name of Ency. ______________________________

   Volume ______________ Page ______________

3. To what country does Cape Horn belong?

   Answer ______________________________

   Name of Ency. ______________________________

   Volume ______________ Page ______________

NAME ______________________________

RESEARCH MATERIALS QUESTIONNAIRE

Use the index to find the key words in your question.

Vermont YEARBOOKS

1. When was Charlotte chartered?

Answer ____

Year of Vermont Yearbook ______________ Page ______________

2. What town is the Adams Reservoir Dam in?

Answer ____

Year of Vermont Yearbook ______________ Page ______________

3. What is the name of a museum in Weston?

Answer ____

Year of Vermont Yearbook ______________ Page ______________

Name ______________________

RESEARCH MATERIALS QUESTIONNAIRE

Use the index to find the key words in your question.

ALMANACS (NEW YORK TIMES, WORLD ALMANAC, READER'S DIGEST)

1. Who won the women's single figure skating medal in the Olympics in 1968?

Answer ______________________

Name of Almanac ______________________

Year of Almanac ____________ Page ____________

2. Who won the baseball World Championship in 1949?

Answer ______________________

Name of Almanac ______________________

Year of Almanac ____________ Page ____________

3. What is the Vermont State Motto?

Answer ______________________

Name of Almanac ______________________

Year of Almanac ____________ Page ____________

Appendix C

Name______________________________ Level_____

Library Evaluation Sheet, 4,5 Grades
Mrs. June T. Giroux, Librarian

	Independently	Needs Minimal Supervision (no more than two questions)	Needs constant Supervision
PARTS OF A BOOK			
Given a book the student can correctly identify:			
1. Spine and spine label			
2. Title page			
A. Title			
B. Author			
C. Illustrator			
D. Place of publication			
E. Publisher			
F. Copyright date			
3. Table of contents			
4. Text			
5. Glossary			
6. Index			
AUTHOR'S NAMES AND ARRANGEMENT OF BOOKS			
Given a list of author's names the student can use proper names used in the card catalog (last name first)			
Given a group of sample cards the student can differentiate between the following types of catalog cards:			
1. Title card			
2. Author card			
3. Subject card			
Given a list of titles, author's names and subjects of books the student can use the card catalog in finding the following:			
1. Fiction books			
2. Biography books			
3. Non fiction books			
4. Reference books			
Using the card catalog the student can locate the following types of books on the shelves:			
1. Fiction books			
2. Biography books			
3. Non fiction books			
4. Reference books			
RESEARCH MATERIALS			
Given a Research Materials Questionnaire the student can find required information listed in:			
1. An Encyclopedia			
2. Vermont Yearbook			
3. Almanac			

Appendix D

BIBLIOGRAPHY FORM

In order to show the proper forms for bibliography entries, the various sources which have been used for examples in this paper are arranged on the following pages as though for an actual bibliography (alphabetical order). The notations in parentheses are for your guidance only to explain sources. These forms were secured from the English Department at CVUHS and will be accepted bibliographies you will be using when you enter high school.

(FOR AN UNSIGNED NEWSPAPER STORY)

1. "Aiding the Arts," The Milwaukee Sentinel (Jan. 15, 1963) 43.

(FOR A SCIENCE DICTIONARY)

2. Asimov, Isaac. Words of Science. New York: Houghton Mifflin, 1959.

(FOR A BOOK BY ONE AUTHOR)

3. Brockway, George W. William Dean Howells: The Development of a Novelist. Norman, Oklahoma: University of Oklahoma Press, 1959.

(FOR A BOOK BY TWO OR MORE AUTHORS)

4. Brockway, Wallace and Weinstock, Herbert. The World of Opera. New York: Pantheon Books, 1962.

(FOR AN UNSIGNED PAMPHLET)

5. Chamber of Commerce of the United States, Foreign Commerce Department. Guide to Foreign Information Sources. Washington, D.C., 1962, 14-16.

(FOR A FILMSTRIP)

6. "The Civil War," 1 filmstrip, Society for Visual Education, A377-1.

(FOR A FILMSTRIP AND RECORD OR CASSETTE)

7. "The Civil War," 1 filmstrip and 1 cassette, Society for Visual Education, A377-1.

(FOR A SIGNED PAMPHLET)

8. Fusco, Gene C. *Organization and Administration of Pupil Personnel Service Programs in Selected School Systems*. Washington, D.C.: U.S. Department of Health, Education and Welfare, Office of Education (1961) 7.

(FOR A SIGNED NEWSPAPER STORY)

9. Giniger, Henry. "France Protests Algiers' Seizures," *The New York Times* (April 6, 1963) 3.

(FOR AN ATLAS)

10. *Hammond's World Atlas*. New Jersey: C.S. Hammond, 1958.

(FOR A SIGNED MAGAZINE ARTICLE)

11. Kane, Will. "Mexico's New Rail Thrill." *Travel*, LX (July 1963) 88-89.

(FOR THE VERTICAL FILE)

12. "The Life of Lenin," *Life*, N.D., Vertical file material.

(FOR LINCOLN LIBRARY SERIES)

13. *Lincoln Library of Essential Information*. Buffalo, New York: Frontier Press, 1971. (Note: Use similiar bibliographies for *Lincoln Library of Social Studies*, and *Lincoln Library of Language Arts*.

(FOR AN INTERVIEW)

14. Lombardi, Vince. Interviewed by Patrick Malone. Green Bay, Wisconsin: Green Bay City Stadium, 10 a.m., October 26, 1962.

(FOR AN ALMANAC)

15. Long, Luman H. (ed.). The World Almanac and Book of Facts. (1969 ed.) New York: Newspaper Enterprises Associates, Inc., 573.

(FOR A RECORD)

16. "A Mark Twain Collection," 1 record, Listening Library A1635.

(FOR A KIT)

17. "Minibikes," 1 cassette, 1 filmstrip, Bowmar, B592.

(FOR CURRENT BIOGRAPHIES)

18. Morits, Charles (ed.) "Tom Jones," Current Biographies. New York: H. W. Wilson, 1971, 34.

(FOR AN UNSIGNED MAGAZINE ARTICLE)

19. "New Life on the River," Time, LXXXL (Jan. 4, 1973), 75.

(FOR A POEM)

20. Parker, Elinor (ed.). "History of John Gilpin," by William Cowper. One Hundred Story Poems. New York: Thomas Y. Crowell, 1951.

(FOR A BOOK THAT IS EDITED OR A CRITICAL EDITION)

21. Shakespeare, William. Macbeth, in Complete Works of Shakespeare. Charles Joseph Sisson, (ed.). New York: Harper & Row, 1960.

(FOR A CASSETTE)

22. "Snowbound and Other Favorite Poems." 1 cassette. Listening Library, CX326.

(FOR A BOOK BY ONE AUTHOR)

23. Teale, Edwin Way. *The Golden Throng*. New York: Dodd, Mead, 1961.

(FOR AN ENCYCLOPEDIA ARTICLE-UNSIGNED)

24. "Tides," *Encyclopedia Britannica* (1968 ed.), X, 753.

(FOR AN ENCYCLOPEDIA ARTICLE-SIGNED)

25. Thermon, Martin. "Tides," Encyclopedia Britannica (1968 ed.) X, 753.

(FOR AN ANTHOLOGY)

26. Untermeyer, Louis (ed.). *Modern American Poetry*. New York: Harcourt, Brace and World, 1958.

(FOR A BOOK WITH NO AUTHOR'S NAME GIVEN)

27. *Webster's Biographical Dictionary*. Springfield, Mass.: G & C Merriam, 1961.

(FOR A BIOGRAPHICAL DICTIONARY)

28. (See above)

(FOR A PERSONAL LETTER)

29. Williams, John F., U. S. Senator from Delaware, to Ralph Morris, March 15, 1972.

(FOR A BOOK THAT IS EDITED FOR A CRITICAL EDITION)

30. Wolfe, Thomas. *The Thomas Wolfe Reader*. Ed. by C. Hugh Holman. New York: Charles Scribner's Sons, 1962.

(FOR A BOOK IN A SERIES)

31. Wright, Louis B. *The Cultural Life of the American Colonies, 1607-1763*.

(The New American Nation Series, Ed. by Henry Steel Commager and Richard B. Morris), New York: Harper & Brothers, 1967)

(FOR A YEARBOOK)

Follow directions FOR AN ALMANAC.

(FOR AN ILLUSTRATION)

Follow directions FOR AN ATLAS, FOR A BOOK, FOR AN ENCYCLOPEDIA or whatever source used.

(FOR A MAP)

Follow directions FOR A BOOK, FOR AN ATLAS, FOR AN ENCYCLOPEDIA or source used.

(FOR CHARTS)

Follow directions FOR A BOOK FOR AN ENCYCLOPEDIA or for source used.

(FAMOUS FIRST FACTS)

Follow directions FOR A BOOK BY ONE AUTHOR.

(FOR AMERICAN BOOK OF DAYS AND OTHER MISCELLANEOUS REFERENCE BOOKS)

Follow directions FOR A BOOK BY ONE AUTHOR.

(FOR READER'S ENCYCLOPEDIA)

Follow directions FOR BOOK BY ONE AUTHOR.

(FOR READER'S GUIDE)

Follow directions FOR A SIGNED MAGAZINE ARTICLE or FOR AN UNSIGNED MAGAZINE ARTICLE.

It is essential to keep a separate, complete and accurate card record of each source you use for information. As soon as you begin to consult a new source, you should make out a bibliography card for it. A 3 x 5 card works well, or paper cut to about this size. Copy the bibliographical information exactly as it appears on the title page, using the same punctuation and abbreviations. Then make notes from these sources below the bibliography. It is well to put different ideas that will appear in different paragraphs on separate cards. Then you can staple them together to know the source they came from for your bibliography. These same cards can then be arranged by ideas with the cards from other sources to complete your report. If the cards are prepared in accordance with the above samples, they will provide all the information you need for your bibliography. Your bibliography will appear in alphabetical order by the first word bibliography as on your card.

Appendix E

Name ____________________

GENERAL PROCEDURES FOR PREPARING A RESEARCH PAPER

Grade ____________________

Topic ____________________

Choosing a subject

1. Select a subject that is interesting and that you will enjoy.
2. Be sure there is available information. Consult your teacher or librarian.
3. Make sure your topic is not too broad. Example: Choose one phase of the Civil War rather than the entire war, such as Battle of Gettysburg.

Locating information

1. Use a variety of sources of information. (See list of Sources to be used for report)
2. Use the card catalog for locating books, Av materials, Vertical file.

Taking notes

1. Complete the reading of the article before you do any writing.
2. Go back over the material and carefully select the information that you wish to include in your report. Be sure you stick to your topic.
3. Write the title of the reference source used on your Source List.
4. At the top of a 3 x 5 card for each source (book, filmstrip, almanac, etc.) using the form of the bibliography, write the bibliography for the source you are using.
5. Using your own words write a key word or key words on 3 x 5 cards under the bibliography to aid you when writing your research paper. Do NOT copy from the books. Use a different card for each different source. If you use two or more cards for one source you may want to staple them together until you arrange your report.

Organize the ideas

1. Organize your 3 x 5 cards in some meaningful order. This can be chronological (by time of events), by process (beginning of idea to conclusion) or cause and effect (problem and solution).

Appendix F

SOURCES FOR THE RESEARCH PAPER

NAME

GRADE 6 7 8

TOPIC

USE AT LEAST ONE OF EACH OF THE FOLLOWING:

	TITLE USED
Encyclopedia (General, Lands and People, Book of Popular Science, Annals of America)	
Reader's Guide (Index to periodicals) or National Geographic Index	
Book	
Almanac or yearbook	

USE ANY 2 4 6 OF THE FOLLOWING:

Atlas	
Current Biography	
Vertical File	
Filmstrip	
Record	
Kits	
Dictionary	
Science Dictionary	
Mathematics Dictionary	
Biographical Dictionary	
Geographical Dictionary	
Other Bibliographical Reference	
Poetry Index and Poem	
Cassette	
Lincoln Library of Essential Information	
Lincoln Library of Language Arts	

	TITLE USED
Lincoln Library of Social Studies	
Charts	
Maps	
Illustrations	
Transparency or Transparency Master	
Famous First Facts	
Guinness Book of World Records	
American Book of Days	
Reader's Encyclopedia	
Newspaper	
Time-Life Capsule	
Tell Me Why	
The Science Library	
Book of Holidays	
Mythology Reference Book	
Poetry Reference Book	
Music Reference Book	
Sports Reference Book	
Encyclopedia of American History	
Art Reference Book	
Other Science Reference Book	
Other Social Studies Reference Book	
Other Language Arts Reference Book	
Other Mathematics Reference Book	

Appendix G

WRITING YOUR RESEARCH PAPER

NAME______________________
GRADE______________________
TOPIC______________________

Write the paper

1. Prepare a tentative outline using main ideas from your research. Write a rough draft of the outline on yellow paper.

2. Arrange notes (3 x 5 cards) according to outline.

3. Write the rough draft of your research paper on yellow paper.

    Introduction

    Body

    Conclusion

4. Arrange the bibliography in alphabetical order by the first word in each bibliography as written on the top of the 3 x 5 cards. Write a rough draft of the complete bibliography on yellow paper. Leave a line between each bibliography and be sure to include all punctuation marks and capital letters.

5. Rewrite the report on white composition paper:

    Outline

    Report

    Bibliography

6. Prepare a title page on white composition paper or construction paper. This should contain the title of your report, name and grade.

7. Proofread all sheets of the final draft of your research paper. Place sheets in the following order and staple in left hand corner:

    Title page

    Outline

    Report

    Illustrations, charts, maps

    Bibliography

8. When your turn in your report to the librarian it should contain the following material:

    Final draft of your report (material in #7)
    Rough drafts of outline, report, bibliography
    3 x 5 cards used in taking notes and bibliographies
    Instruction Sheets, Source List, Bibliographical Form

Appendix [illegible]

Name______________________________Level________

REFERENCE MATERIALS AND THE RESEARCH PAPER

Library Evaluation Sheet, 6,7,8 Grades
Mrs. June T. Giroux

	Independently	Needs Minimal Supervision (no more than one question asked)	Needs constant Supervision
REFERENCE MATERIALS:			
The student recognizes a variety of reference books and difference between sets of materials by various publishers......			
The student can identify and find AV materials by using the card catalog and its color coding system......			
The student can use the *Reader's Guide To Periodical Literature* to find articles in periodicals......			
The student can use the card catalog to find material in the vertical file......			
The student has chosen a topic for a Research Paper and has found materials on that topic from a variety of reference and AV sources......			
THE RESEARCH PAPER:			
Order of report The report was in the proper order: 1. Title page......			
2. Outline......			
3. Text......			
4. Maps, Illustrations, Charts......			
5. Bibliography......			
Title page The title page included the title of the research paper, the student's name and grade......			
Outline Evaluated by homeroom or language arts teacher Text Evaluated by homeroom or language arts teacher			

THE RESEARCH PAPER:

	Independently	Needs Minimal Supervision (no more than one question asked)	Needs constant Supervision
Note cards (3 x 5)			
The student wrote a complete bibliography....			
The student wrote key words and ideas on note cards using a separate card for each source....			
Source List			
The student used one of each of the following:			
Encyclopedia....			
Reader's Guide....			
Book....			
Almanac or Yearbook....			
The student used 2 4 6 additional sources of individual choice in reference of AV materials....			
Bibliography			
The student arranged the bibliography in alphabetical order....			
The student used the correct form in writing the bibliography....			
The student used correct punctuation in the bibliography....			
Report Content			
The student used white composition paper to write the final draft of the Research Paper....			
The student included in the report folder the following materials:			
Final draft....			
Rough draft of			
Outline....			
Text....			
Bibliography....			
3 x 5 note cards....			
2 Instruction sheets....			
Source List....			
Bibliographical Form....			

LEVEL K 1 2 3

OBJECTIVES

NAMES	1	2	3	4	5	6

LEVEL 4 5

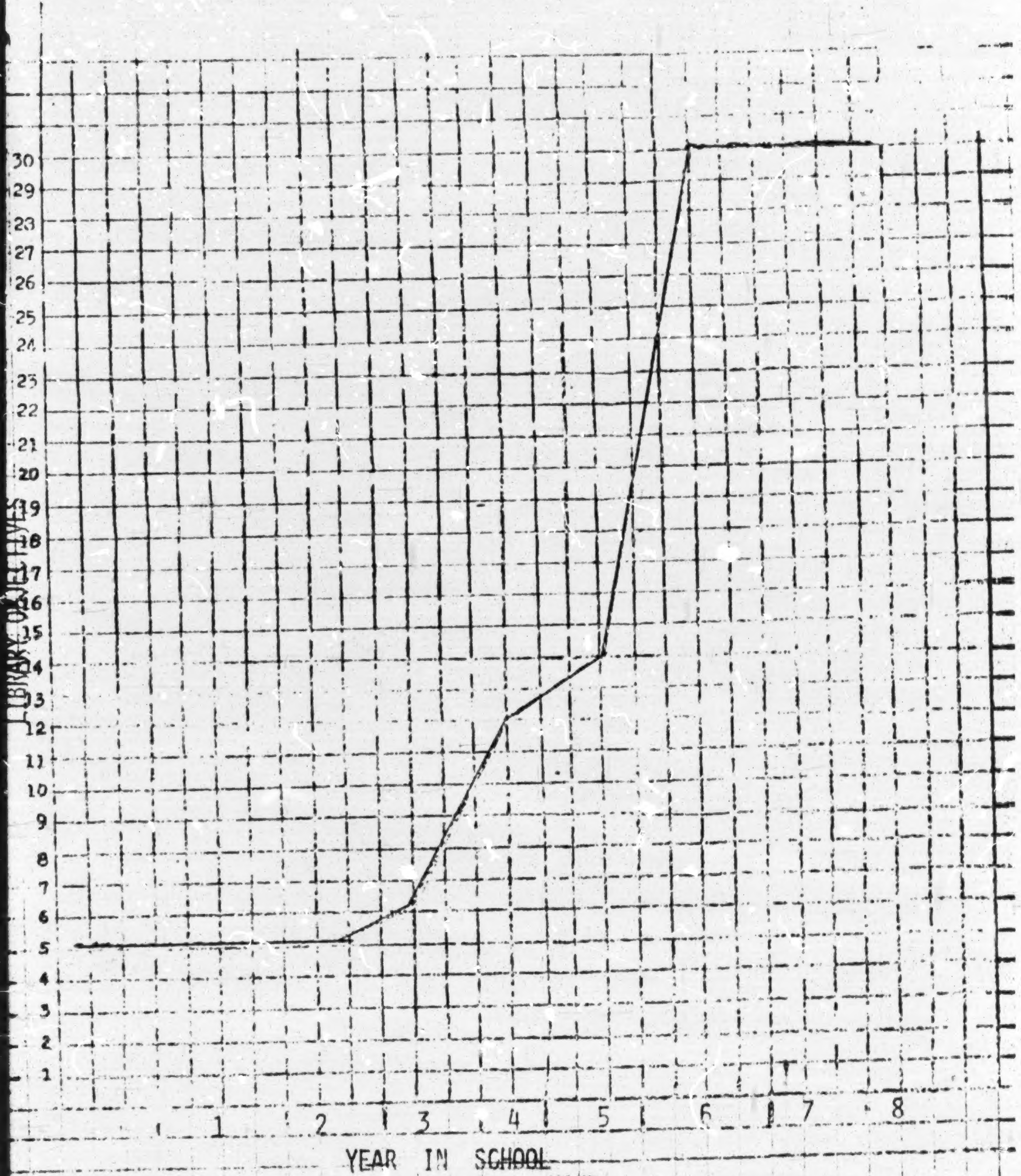
OBJECTIVES

NAMES	1	2	3	4	5	6	7	8	9	10	11	12	13	14		

LEVEL 6 7 8

	OBJECTIVES																													
NAMES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

YEARLY MINIMUM OBJECTIVES EXPECTED IN LIBRARY SKILLS



NAME

DATE & YEAR OF SCHOOL ENTRY